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JUNE 21, 1947

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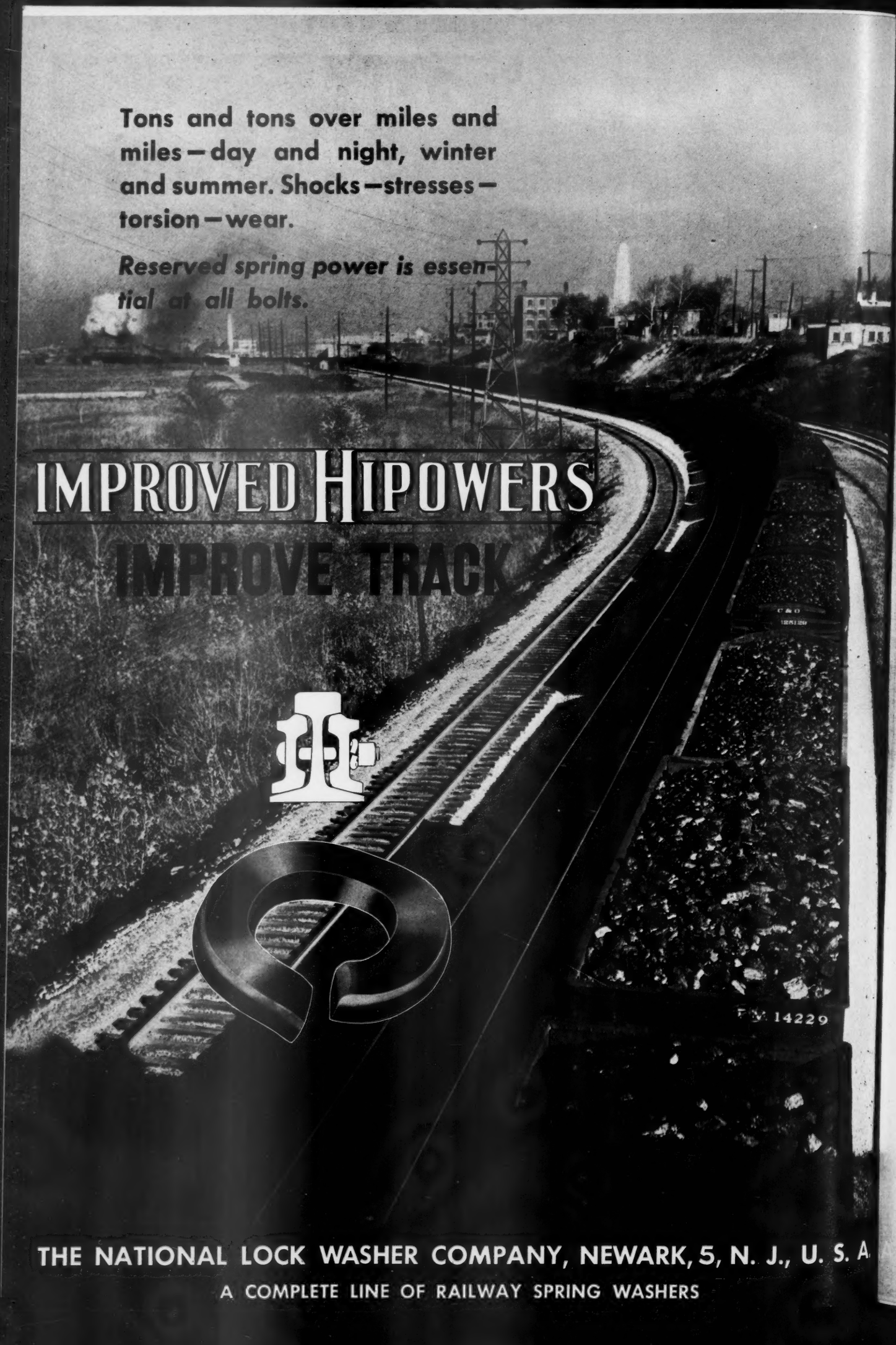
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Railway Age is a member of Associated Business Papers (A. B. P.) and Audit Bureau of Circulation (A. B. C.), and is indexed by the Industrial Arts Index and by the Engineering Index Service.

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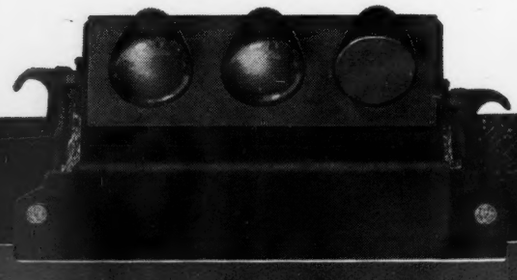

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NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

RAILWAY AGE

Who's to Blame for the Car Shortage?

The inconvenience and economic loss attendant upon the persistent shortage of freight cars have raised tempers to the point where a culprit is being sought upon whom to lay the blame for the deficiency. There is no question whatever that the *immediate* cause of the shortage is the lack of a sufficient supply of steel to the car builders—which was denied to the railroads and the contract shops throughout the war period by government authorities, and has continued to be denied by the steel industry itself, since government controls over the allocation of materials were lifted, with some alleviation during the past couple of months. Fair judgment cannot, however, be reached as to the degree of culpability, if any, of the government authorities and the steel industry without taking into account the claims of other users of steel.

A Scapegoat Sought

Since "the wheel that squeaks the loudest gets the grease," it may well be that the War Production Board and the steel industry are guilty of having allocated some, and possibly a great deal, of steel to frivolous and non-essential uses to the detriment of the public interest in adequate transportation service. To entertain a suspicion to this effect is, however, quite a different matter from being able to prove the case convincingly. Public indignation, for its purposes, requires a victim who, however innocent, can defend himself only by a complicated explanation which people will not have the patience to try to comprehend. The claims of other users of steel afford so plausible an excuse for the failure of the W. P. B. and the steel industry to supply sufficient steel for car building that, however faulty this explanation may actually be, it nevertheless makes the W. P. B. and the steel industry unpromising candidates for the office of scapegoat.

Are the Railroads Blameworthy?

So, at least for the time being, the pack is hunting elsewhere. The Justice Department, by choosing such a time as this to launch a grand jury investigation into alleged monopolistic practices by the car builders, is evidently testing the qualifications of that industry for the role of the villain in the piece. If, pursuing what has become standard Justice Department technique, it can secure sufficient publicity for sensational hints and innuendoes against the reputation of this industry, probably the quest for a victim upon whom to fix the opprobrium for the car shortage may not have to go any farther.

But the attributes of the railroads themselves for this role are also being looked into. For instance, one or two critical observers, including President William C. MacMillen of the Federation for Railway Progress, have been saying that it is an error to blame the car shortage wholly on the war, because the railroads had fewer cars in 1946 than in 1916, despite the efforts of some government officials back in 1939 to persuade them to purchase a large number of cars. These facts are correct, but not the inference drawn from them, as the figures in the accompanying table will show.

In the five years ended 1940 the railroads had an average daily car surplus which was almost 26 per cent of the average weekly carloadings. This surplus, as the

Freight Car Supply, Surplus, and Some of the Factors Governing Freight Car Acquisition, 1916-46

Yearly Avg. of 5-Yr. Totals or Averages, Ending Year	Freight Cars in R.R. Ownership	Cars Ordered	Daily Avg. Freight Car Surplus (000)	Avg. Weekly Carloadings (000)	Ratio of Surplus to Avg. Weekly Loadings %	Return on Investment in R.R. Property %	High Point of Dow-Jones Avg. of R.R. Stock Prices
1920	2,413,751	87,304	69*	868†		3.33	112‡
1925	2,417,885	105,757	194	893	21.7	3.97	113‡
1930	2,385,747	67,252	277	980	28.3	4.41	189‡
1935	2,096,022	11,437	484	603	80.3	1.75	111‡
1940	1,751,447	48,959	173	673	25.7	2.22	64‡
Year							
1941	1.755,598	106,897	80	814	9.8	3.75	30
1942	1,798,147	28,560	60	823	7.3	5.50	29
1943	1,809,439	37,030	37	816	4.5	4.92	38
1944	1,822,407	54,481	14	834	1.7	3.97	48
1945	1,812,271	38,230	3	806	0.4	3.01	65
1946	1,758,360	68,925	10	795	1.3	2.19	68

* Avg. daily shortage, year 1920 only.
† Year 1920 only.
‡ Highest point attained by the avg. in 5-yr. period.

table shows, was actually larger in relation to the demand for freight cars than the surplus was back in the five years ended 1925. The adequacy of the railroads' supply of freight cars cannot be gaged by a figure of car ownership—it is not the total cars owned that count, but the car supply in relation to the demand. The table shows that the railroads came right up to the war period with a substantial surplus of cars in excess of the demand, even though the number of cars owned had declined 766,000 from the first half of the Twenties.

The railroads knew in 1939, what no one else knew, namely that, in the event of war, they had a plan for car utilization which would vastly increase the production of ton-miles by each car. So when a little group of government economists hysterically called in 1939 for orders for hundreds of thousands of cars, the railroads gave little heed to them. Even though, as it turned out, the war produced traffic beyond the expectations of anybody, the railroads handled all of it with no car shortages of any consequence. Indeed, the very same clique of New Dealish economists who, before the war, had insisted that the railroads buy hundreds of thousands of cars, was most insistent in holding down allocations of steel to the railroads, once the war had started.

The table discloses that the period of lowest activity in the building of new freight cars was the five years ended 1935—with the next five years not a great deal better. Those years were marked by low earnings on the investment and by sub-standard prices of railroad stocks. When earnings on capital already invested in the railroads are at a starvation rate, and facilities of all kinds exist in surplus, a management which would invest still more money (if, indeed, any money were available) to pile up still further surplus facilities would run the risk of being ousted by the stockholders and creditors. There was deep pessimism as to the future of both railroad traffic and earnings in the Thirties. The New Dealish economists were at the forefront in this pessimism. They not only thought the industry had seen its best days, but they did their best to make sure that their opinions were right by fostering tax-fed rivals to the best of their ability. In such an atmosphere, which grew until it captured the investment community also, the wonder is not that the railroads did not purchase more freight cars and other equipment than they did, but that they bought anything at all on capital account.

The Actual Culprit

Now, railroad traffic has demonstrated the folly of all this pessimism—but railroad earnings have not done so. Present earnings and present market prices for railroad stocks offer no more incentive for the railroad industry to add to its facilities greatly beyond immediate demand than did earnings and market prices in the Thirties. The fundamental reason why the railroads do not today have cars and other facilities adequate to traffic demands is the fact that their traffic and earnings were allowed to sink so low in the Thirties. The low earnings and traffic of that decade were due in large measure to the depression, but this was exaggerated by the proliferation of public expenditures upon government owned transportation plant.

A convenient scapegoat may be found which can be beaten and flayed in punishment for the car shortage—but the actual culprit is the nation's policy toward transportation, which fosters rivalry against the railroads at the expense of the public treasury; which persistently prosecutes (or, more accurately, persecutes) the industry on flimsy allegations of "monopoly" and "overcharges"; which denies or delays rate changes to conform to increases in costs, holding down earnings to depression levels at a time of record traffic; and then wonders why this industry, dependent entirely upon private capital for enlargement of and improvements to its plant, has turned up somewhat short of the capacity which is demanded of it.

The immediate car shortage will vanish after steel supplies match the capacity of the car builders to build cars—but a chronic recurrence of the trouble can be prevented, under private ownership, only if earnings and stock prices take on the pattern of the Twenties, rather than continue, as they are now doing, to imitate those of the Thirties, during which period the present shortage of cars was germinated.

Evolution of the Diesel Locomotive

During the early years of the installation of Diesel-electric locomotives in railroad service few persons on the railroads having to do with locomotive operation or maintenance had any knowledge of how the characteristics of these locomotives which distinguish them from steam affected methods of operation and maintenance. During this period complete dependence had to be placed upon the builders of the locomotives for operating instructions and suggestions as to maintenance system and methods.

Inevitably, as operating experience with the new type of motive power accumulated, railway men became keenly aware of the requirements of yard and train operation upon the new type of motive power and of hindrances to simple maintenance procedures.

The first public recognition of this change in relationships came with the symposium at a railroad session during the last annual meeting of the American Society of Mechanical Engineers when a panel of railway officers dealt with the problems of maintenance of Diesel power. Many suggestions for changes in future designs to reduce the cost of maintenance were forthcoming. They affected electrical equipment, the prime mover, the chassis, running gear, and accessories. These suggestions have received the thoughtful attention of the manufacturers involved, and at a session of the semi-annual meeting of the same society at Chicago during this week, in which representatives of the locomotive builders and electrical manufacturers participated, consideration was given to the suggestions of the railroad representatives at the earlier meeting and the builders interpreted their own designs in terms of their relation to the maintenance problem. Elsewhere in this issue there appears the paper by A. H. Candee, transportation engineer of the Westinghouse Electric Corporation, which clearly appraises the limitations of the electrical equipment of the Diesel locomotive and the relation of a number of design factors

to the reliable performance and economical maintenance of these locomotives. The other papers will be dealt with in later issues.

These sessions of the A.S.M.E. are helping materially to create a wholesome atmosphere of cooperation between the manufacturers and users of the Diesel-electric locomotives. Out of them is developing a mutual understanding of limitations within which the builders have to work, on the one hand, and the nature of the difficulties which the railroads face in the operation and maintenance of the locomotives, on the other. The thought put into the preparation of the papers for these programs cannot have failed to clarify the thinking of the participants in them, at least. It is to be hoped that the clarification may permeate much farther in the organizations which they represent.

Maintenance Ratio—What Does It Show?

The ratio of maintenace of way and structures expenses to total operating revenues is frequently used as an index of the efficiency with which maintenance work is performed. Just as frequently, because of its sensitivity to factors having nothing to do with efficiency, this ratio is considered to have little value as a means of reflecting the performance of the maintenance forces on a strictly comparable basis. Many a truth is spoken in jest—and the recent statement by a maintenance officer, to the effect that the maintenance ratio is merely an index of success in getting money to spend on the tracks and structures, may have more significance than was intended.

During the past 30 years the railroads as a whole have made rapid progress in furthering the efficiency of their maintenance-of-way activities. Proof of this progress is contained in the vastly greater output per man-hour that is the rule today because of the intensive use of power-driven machines. Other evidence is afforded by the stronger and more durable track construction prevailing today and the many effective methods now in use for prolonging the service life of materials. Yet, in spite of these advances, the maintenance ratio of 12.9 for the Class I railroads for the first three months of this year was not significantly different from 1915, when the ratio was 12.2.

What has happened is that progress toward increasing the efficiency of the maintenance forces has been paralleled by compensating increases in wages and material costs, along with a need for much higher standards of maintenance and construction. Actually, the situation has constituted a race between increasing efficiency on the one hand and the factors tending to increase costs on the other—with the outcome to date apparently a draw. In fact, there are some indications that the "higher-cost" forces have gained a slight edge in the race. For example, for the five years ended with 1939 the average maintenance ratio was 11.6, or more than a full point less than the figure of 12.9 for the first quarter of 1947. Moreover, during the war years the maintenance ratio curve exhibited a pronounced upward bulge, reaching a maximum of 15.8 in 1945, but much of this increase may be discounted on the ground that it was brought about largely by temporary factors that have now pretty much disappeared.

Because it is influenced by so many extraneous factors, such as changes in wage rates, material costs, freight and passenger rates, traffic volume and even accounting practices, the maintenance ratio may not be an accurate index of variations in the efficiency of the maintenance forces over a period of years. But it *is* a measure of the success attained in counteracting the forces that tend to increase maintenance costs. Comparison of the ratio today with former years indicates that those responsible for keeping down maintenance costs have just about held their own. Considering the obstacles they have had to overcome, this is a praiseworthy accomplishment.

Nevertheless, the failure of the maintenance ratio to show any decrease whatever over a period of 30 years constitutes a challenge to every maintenance officer. It still has not been shown that a more intensive application of the practices which have prevented the ratio from increasing would not serve to reduce it. Merely to prevent the ratio from going higher than it was last year, or to keep it on a par with those of other roads, is not an adequate objective.

Rail Safety—Explanation

So many readers have written to call attention to an apparent discrepancy in the figures presented in an editorial titled "Is Train Travel Unsafe?" (issue of May 31, page 1108) that a clarification of the data therein appears to be in order. In the second table appearing in the editorial, the rate of passenger deaths, for example, was given as 0.10 per 100 million passenger-miles, while the third table, based on data from the National Safety Council, gave a ratio of 0.18. Which is right?

The computations of both *Railway Age* and of the council are correct, and both originated with the basic data reported by the Interstate Commerce Commission. The fault lies with the writer of the editorial in that he did not emphasize the fact that the table showing deaths and injuries for *railroad* passengers solely (to show the trend within the industry) is headed ". . . Resulting from *Train Accidents.*" Under this category the statisticians list deaths and injuries in connection with collisions and derailments. It is with these types of accident that the editorial dealt.

But "train accidents" are not the only means by which passengers may suffer fatalities. In 1945, for example, 65 passengers were killed in "train accidents," while 77 were killed in "train service accidents." The latter category includes casualties resulting from "coming in contact with fixed structures," "getting on or off cars and locomotives," and other situations not involving substantial property damage. The comparative figures given by the National Safety Council cover deaths of railroad passengers in all categories of accident—for comparison with other forms of transport—and, obviously, present a more unfavorable ratio than that computed by *Railway Age* to show deaths resulting from "train accidents."

Left—The top deck of the icing platform, showing the conveyor chain, the side walls in the raised position, and the trap doors in the deck. Right—On the sub-deck of the platform, showing five of the new ice "slingers." Note operator's platform on slinger in foreground

"Mass-Production" Icing on Union Pacific

Addition of 3,740-ft. double-deck platform to existing plant at Laramie, Wyo., permits 248 cars to be serviced simultaneously—Features include new-type ice "slingers"

THE icing facilities on the Union Pacific at Laramie, Wyo., an important re-icing point on this road for perishables moving eastward, have been enlarged and improved recently by the construction of a new platform having a capacity of 170 cars, which, when added to the capacity of 78 cars for the existing plant, now permits the icing of 248 cars simultaneously. Features incorporated in the new facilities to reduce icing time and add to the safety of operation include double-deck construction, permitting bunker and top icing of all cars to be carried on simultaneously; the provision, for top or body icing, of eight ice "slingers" of an improved type, which operate on a continuous track on the lower deck and which receive ice through trap doors in the upper deck; side walls on the upper deck, which can be lowered to form aprons to facilitate bunker icing; and a two-way loud-speaker communication system.

The new facility at Laramie was constructed at a cost of $308,000 by the Pacific Fruit Express, which is owned jointly by the Union Pacific and the Southern Pacific. The platform, of the island type, is of timber construction on concrete foundations. It has a roof over the upper deck, with a centrally-located inspector's office astride this roof.

Platform Design

Length of the platform is 3,740 ft., or such that 85 cars can be spotted on each side of the platform at a time. Both decks are 13 ft. 6 in. wide, and the sub-deck is at car-floor level, being 4 ft. above the top of rail. This deck is equipped with a track extending its entire length, which has a gage of 46 in. and which is constructed of 16- and 20-lb. rail. Operating on this track are the eight ice "slingers" mentioned above. above.

The upper deck of the new platform is 14 ft. above the top of rail, and is provided with continuous side walls consisting of aprons with lengths corresponding to the spacing of the posts supporting the roof. These aprons are each hinged to the platform and can be lowered individually to rest on the roofs of cars being iced, thereby facilitating the handling of ice into the bunkers. Eighty-five trap doors, one every car length, are placed in the floor of the top deck, through which ice is transferred to the "slingers" on the sub-deck. Cakes of ice are fed to the top deck from an adjacent storage building, and are moved to any desired point on this deck in either direction by means of conveyor chains.

The Ice "Slingers"

Equipped with flanged wheels for operation on the track of the lower deck, the new "slingers," which were designed jointly by the Pacific Fruit Express and the Link-Belt Company and manufactured by the latter, are each complete with hopper, crushing drum,

blower and hose. The hose has a hinged metal lip for directing the stream of ice into the corners of cars. Full cakes of ice are fed into the hoppers of the "slingers" through the trap doors in the top deck. In the hopper the ice cakes are pulverized by 36 iron picks on the face of a whirling 24-in. drum, after which the powdered ice drops onto a 6-in. worm gear which feeds it into a fan that blows the "snow" through a 14-ft. flexible rubber hose 4 in. in diameter.

High Capacity

The "slingers" are of the two-speed type, slow speed being 1,200 r.p.m. and high speed 1,800 r.p.m. The slow speed is used when cars are being top iced at the doorways. These units can handle from 40 to 60 tons of ice per hour and are said to be capable of throwing a stream a distance of 40 ft.

A portable platform, with a wire net deck, is carried on each of the machines for the use of the "slinger" operators. By standing on this platform the operator can easily see over the top of the lading into a loaded car, to direct the ice stream. It is pointed out that the wire-net standing surfaces on these platforms provide safer footing than wood platforms, since waste ice sprinkled on the platforms drops through them instead of packing under foot.

The original platform at Laramie has no sub-deck, and the slingers were operated from the same deck from which bunker ice was applied. The method of operation was for the hose operator to stand on a platform ladder placed against the side of the car being iced, with the hose being dropped down over the side of the platform to where he was working several feet below.

Heavy But Readily Movable

The ice "slingers" on the new platform, weighing 5,320 lb. each, are said to be the largest units of this type in use. Despite their size and weight it is reported that one of these machines can be rolled on the track by one man without great effort. This ease of movement is said to be in sharp contrast to the seven "slingers" in use on the old Laramie platform for the past decade. Mounted on wheels, these weighed 1,800 lb. each, and three men were required to move one of them into position. In using these machines ice had to be fed into the hopper by hand, requiring three or four men, and in addition it was necessary for another worker to break cakes of ice into small pieces for convenient handling.

To determine the efficiency of the new "slingers" a test was conducted which involved the icing of three widely-separated refrigerator cars with one of these machines. The result was that the three cars were top iced with an average of 3,000 lb. of ice in an elapsed time of 31 min., including the time required to move the machine a distance of 28 car lengths.

It is felt that this performance will be improved even further as the workers gain experience in handling the machines.

The position of the new "slingers" on their track with respect to one another may be changed by means of a laterally-sliding portion of the sub-deck. To make such a change of position one of the machines is switched onto the track on the sliding portion of the platform, which is then moved to one side so that a temporary section of track may be substituted for it, on which other machines can be rolled by. The sliding portion of the platform is then moved back into its original position. The slingers obtain their power from electrical outlets spotted on posts along the platform, there being 85 such outlets, or one every car length.

The communication system provided in connection with the new icing platform is expected to expedite the servicing of cars because of the greater speed possible in relaying last-minute changes in icing instructions. This system is also expected to serve a useful purpose in transmitting general orders and safety warnings. Microphones for the communication system are located in the inspector's office on the roof of the new platform, in the main office of the icing plant, and at a joint Pacific Fruit Express-Union Pacific control office. Seventeen loudspeakers are located at strategic positions on the new platform, three are in ice storage rooms, one is in the plant shop, and one is in the crews' locker room. All speakers are of the two-way type.

A measure of the size of this undertaking is given by the fact that it required 25 carloads of lumber for the dock, 5,000 lb. of nails, 5,000 lb. of bolts, and over 71,000 ft. of wiring, including approximately 12,000 ft. for the public address system.

Top-icing a "reefer" with one of the new ice "slingers"

Senate Passes Anti-Trust-Relief Bill

Amended version of measure sponsored by Senator Reed of Kansas approved by a 60-to-27 vote after lengthy debate; now stipulates that Georgia anti-trust case shall not be affected

THE Senate on June 18 passed an amended version of S.110, the bill sponsored by Senator Reed, Republican of Kansas, to stay the operation of the anti-trust laws with respect to carrier rate-making procedures and other joint actions approved by the Interstate Commerce Commission. The favorable vote of 60 to 27 came on a roll call shortly after 4 p.m., the hour set for voting by a unanimous-consent agreement entered last week.

One of the amendments adopted on the floor stipulates that enactment of the bill will not affect Georgia's anti-trust complaint against eastern and southern railroads which is now pending before the Supreme Court's special master, Lloyd K. Garrison. This amendment was offered by Senator Russell, Democrat of Georgia, and not objected to by Senator Reed.

Other amendments were those offered by Senator O'Mahoney, Democrat of Wyoming, as set out below. All of them were accepted by Senator Reed and adopted by the Senate except that which would have required congressional approval of agreements relating to the establishment or functioning of associations or organizations composed of two or more carriers. Senator Reed opposed such a provision and the Senate supported him. On the vote on the bill Senator O'Mahoney was recorded in opposition.

The "Only Way"

Other amendments, opposed by Senator Reed and rejected by the Senate, were offered by Senator Taylor, Democrat of Idaho. As explained by Mr. Taylor one of them would have preserved for persons damaged by carrier actions the rights they now have under the anti-trust laws to sue for triple damages. Senator Reed called the proposal "preposterous." Another Taylor amendment, which was also rejected, would have added, as a rider, legislation to set up a federal traffic bureau for the handling of all government transportation requirements.

The unanimous-consent agreement whereby the Senate proceeded at 4 p.m. on the 18th to vote on pending amendments and then on passage of the bill itself developed from the suggestion of Senator Wherry of Nebraska, the Republican whip. The agreement was reached on June 13 after the debate, which opened on June 9, had been going on for five days. Proponents of the bill in general stressed their conviction that there was no other way to avoid chaos in the field of transportation rate-making and to reconcile the Interstate Commerce Act with the anti-trust laws as now interpreted by the Department of Justice. Opponents, on the other hand, assailed the bill as one which would block further proceedings in the so-called Lincoln and Georgia anti-trust cases and prevent removal of alleged discriminations against the South and West.

Also, there were charges that passage of the bill would lead to government ownership of railroads and comprise a step toward collectivism or fascism. And Senator Tobey, Republican of New Hampshire, an opponent of the bill, said that a "railroad lobbyist" had used with respect to him a four-word phrase reflecting on his ancestry.

958 Supporting Groups

In his opening statement, Senator Reed had said that many assertions made about the bill up to that time had been "sheer balderdash." And the debate was in its fourth day before the Kansan heard what he considered an "intelligent" approach—he was "tempted to say almost the first intelligent approach." Senator Reed thus complimented Senator O'Mahoney, Democrat of Wyoming, who was discussing some amendments he proposed to offer. Moreover, much of the debate, as Senator O'Mahoney put it, was conducted "in a vacuum" because so many senators were absent from the floor.

Senator Reed's opening statement presented a list and analysis of the 958 groups which were on record in support of the bill or its predecessors in previous Congresses. The analysis showed that the list included 48 state and federal government authorities, including the Interstate Commerce Commission, Office of Defense Transportation, and National Association of Railroad and Utilities Commissioners; 20 carrier organizations; 85 shipper, traffic, and transportation organizations; 145 agricultural and livestock organizations; 108 business organizations; and 552 chambers of commerce, civic, and other organizations. The business and shipping organizations on record in support of the legislation, the senator said, "unquestionably represent 99.9 per cent of the traffic moving in this country." Also, he pointed out that the bill was supported by the Railway Labor Executives' Association; and by J. V. Norman of Louisville, Ky., who was counsel for governors of southern states in the interterritorial freight rate cases.

Senator Reed called the measure a "shippers' bill as well as a bill affecting railroads." He noted that "for 45 years thousands of tariffs containing billions of rates have been largely determined through conferences, rate bureaus, and rate associations." The senator knew of "no other method by which this first essential of transportation can be completely accomplished." He had asked all tariff and transportation experts appearing before the committee if they knew of any other method, and all replied in the negative. Thus organizations favoring the legislation regard it as "a national necessity" in view of the present attitude of the Department of Justice's Anti-Trust Division. The "expert representatives" of the supporting organizations, Senator Reed continued, "unanimously agree that if the policy begun by the Anti-Trust Division through grand-jury proceedings in Chicago in 1942 were carried through, chaos would result."

Like Air-Act Provision

The senator went on to point out that the Civil Aeronautics Act has provisions relieving air carriers from the anti-trust laws with respect to agreements approved by the Civil Aeronautics Board. He also noted that the Shipping Act of 1916 granted water carriers like immunity with respect to agreements approved by the Shipping Board. And he agreed with Senator Hawkes, Republican of New Jersey, who suggested that even after the courts have decided the Lincoln and Georgia cases the railroads will still be "in an area in which they will know nothing about what other prosecutions may be instituted."

Meanwhile, the Senate's majority leader, Senator White, Republican of Maine, who is also chairman of the

committee on interstate and foreign commerce, brought out the fact that the bill would extend commission regulation to matters not heretofore under its jurisdiction. He noted that the bill would add a new section 5a to the Interstate Commerce Act, and that the present section 5 grants immunity from anti-trust laws with respect to mergers and consolidations approved by the commission. Senator Saltonstall, Republican of Massachusetts, asked if the Senate in passing the bill would be "anticipating the decision of the Supreme Court." And Senator Reed replied that such a suggestion "is one of the red herrings that is drawn across the trail." He insisted that the Senate committee on interstate commerce "saw the need for clarifying this matter before the Georgia folks ever thought of filing a case, and before the Lincoln, Nebr., case was filed."

When the Kansan went on to say that he does not think the bill "touches the Georgia case," Senator Russell, Democrat of Georgia, disagreed. He conceded that his state could still win the case "as to past transactions," but it "would be absolutely denied protection against future wrongs." He also said that in his opinion the bill was "designed to defeat" the Lincoln and Georgia cases; he found it a "strange coincidence" that "every time the hot breath of justice is felt on the neck of the railroads this bill is pushed forward."

Russell Leads Opposition

After answering a few more questions, Senator Reed yielded the floor, and Senator Russell made his prepared speech in opposition to the bill. He questioned whether all those endorsing the bill were informed about it, for he knows that the railroads "through the vast machinery of their organizations, with the smartest attorney in every town representing them, have had speakers go from one end of the country to the other. . . ." To Mr. Russell the movement for passage of the bill looked like an effort "to immunize the railroads from the operation of the anti-trust laws at a time when monopoly is on the march," and "small business in this country is being destroyed every day." It was also his view that the advocates of the bill "are driving toward nationalization of the railroads much more rapidly than are those who oppose it."

The I.C.C.'s interest in passage of the bill was appraised by the Georgian as one which flows from the commission's disinclination "to go to the trouble it should assume to meet its full responsibility to the American people." He suggested that the commission may have lost the "zeal of a crusader" and become "fat and lazy." Previously he had said that the bill would establish a "quasi-governmental agency within the Association of American Railroads," thus permitting the commission "largely to escape the responsiblity which belongs to it."

Senator McMahon, Democrat of Connecticut, recalled that R. W. Purcell, vice-president of the Chesapeake & Ohio, who objected to the bill because it was not confined to rate matters, had stated that it would have been impossible to operate the railroads without rate bureaus. Mr. Russell's reply was that "no one is undertaking to abolish the rate bureaus." He added that the railroads should be operated "in the same way" that other corporations are operated. "Let the railroads," he continued, "function and let them perform the responsibility of arriving at freight rates, but let us not throw over them a mantle which will protect them from prosecution or from suits under the anti-trust laws to which other citizens of the United States are subject."

In response to a question from Senator Stewart, Democrat of Tennessee, Senator Russell stated that exemption of the railroads from anti-trust laws would permit them "practically to nullify" the commission's decision in the No. 28300 class rate case which was recently upheld by the Supreme Court. Meanwhile, the Georgian, with prompting from Senator Stewart, had praised the work of the defunct Board of Investigation and Research, which, he said, was created to do what the I.C.C. "should have done many years before, namely to investigate the question of the cost of transportation, and also to go into the whole problem of the freight rate structure of the nation." Into the record went excerpts from the report made by former B.I.R. Member C. E. Childe in his subsequent role of consultant to the Senate small business committee's transportation subcommittee, of which Senator Stewart was chairman. Whereupon Senator Reed cited from the hearings on the bill testimony wherein Mr. Childe had said that rate bureaus were a "practical necessity," and should be regulated by the I.C.C.

Tobey Sees Truman Opposed

Senator Tobey, who made a minority report when his colleagues on the committee on interstate and foreign commerce reported the bill favorably to the Senate, was the next opposition speaker. He asserted that "although the bill would place a monopoly grip on the neck of American small business, propaganda has been flooding Congress that everybody in America wants the bill." Mr. Tobey's explorations in this "jungle of propaganda" have turned up a few who are on record "against railroad monopolies." Among them he listed former Senator Wheeler of Montana and President Truman (then a member of the Senate) who were sponsors of the Senate version of the legislation that became the Transportation Act of 1940. He recalled evidence with respect to the A.A.R. and its legislative activities which was brought out in investigations conducted by the Senate committee on interstate commerce during the Thirties, when former Senator Wheeler was the committee's chairman and President Truman a member and an active participant in the investigations. "The bill," Senator Tobey charged, "provides the ways and means of placing every activity of the railroads and other land and water carriers under the control of groups dominated by the Association of American Railroads. . . . It is the road to fascism in American business. . . ."

What "Lobbyist" Said of Tobey

The remark which Senator Tobey said a "railroad lobbyist" had made with respect to him was quoted by the senator after Senator Hoey, Democrat of North Carolina, had observed that revelations as to what individual railroad officers may have done do not "begin to discount the management and the integrity and the high purpose of the people who control the railroads in this country."

"Let me tell the Senator," Mr. Tobey said, "an incident that happened downstairs just now. . . . I was dining downstairs with a daughter of mine when a Department of Justice man, a friend of mine, came to me and said, 'Sir, I appreciate the factual statement you made about the operations of the Association of American Railroads, in connection with their corrupt practices. May I tell you that, sitting behind you are three railroad lobbyists, one of whom called you a --- -- - -----, and another of whom said you ought to go to hell. They consigned you to hell, and they attacked you all the way through.' I asked him, 'Where are they?' He pointed them out to me. I got up and walked to their table and said, 'My compliments to you, gentlemen.' I said, 'I understand you called me a --- -- - -----, and consigned me to hell, and made other statements about me.' I said, 'This is a free country—you have a right to make any statement you want, but let me say to you that what I read this morning, which you did not like, was your own statement of your own factual wrongdoing, out of your own records, under the Wheeler and Truman leadership, and,' I said, 'you are crooked, sirs, from top to bottom, and you played the game that way. Now, I subside, because I still want to be a gentleman and hold my temper.' I walked away. I wanted the senator to know that, and I want the Record to show it."

Senator Hoey assured Mr. Tobey that he was not defending anyone who engages in such practices, but went on to say, of the railroad men in his state, that "they are as honorable and as high-toned men as are to be found engaged in any other kind of business." This exchange took place while Senator Hoey was making a speech in favor of the bill.

A "Great Misconception"

In that speech he said that there had been "a very great misconception" about the proposed legislation, which "does not remove the railroads from under the anti-trust law" but "merely provides that the railroads may continue to do what they have been doing for 50 years." As Mr. Hoey put it, the bill has "no relationship to the evils" about which Senator Tobey was complaining. He went on to point out that under its provisions the attorney general was given the right to be heard concerning any rate, and he insisted that the shipper and business organizations supporting it had not been so naive as to have been duped by propaganda.

"I cannot see how anything could be fairer than this bill," he concluded. "I do not agree at all with the idea that it would exempt railroads from any of their proper responsibilities. I think it is a practical measure which deals with our existence in the business world, and affords the sort of relief and consideration which must be given if business is to be carried on."

Mr. Hoey had been preceded by Senator Moore, Republican of Oklahoma, who also made a favorable address. He identified the "only real opposition" as the "joint resistence" of former Governor Arnall of Georgia and the Department of Justice. Their opposition, he added, "was supplemented to some extent by Henry Wallace, then secretary of commerce, and one or two other witnesses representing almost negligible minorities." Mr. Moore also recalled that "it was not until the railroads of the country were being called upon to perform almost superhuman tasks during the early days of the war that the Anti-Trust Division of the Department of Justice undertook a campaign of harassment and interference against the railroads and motor carriers."

Encroachment on Judiciary

Senator McFarland, Democrat of Arizona, was against the bill, and he devoted his opposition speech largely to argument in support of his view that enactment of the measure would constitute an encroachment by Congress on the judiciary. "It is," he said, "in the public interest and in the interest of orderly procedure and good common sense for Congress to see what the court says before it legislates on a question that is of such great importance to this nation."

During the course of Senator McFarland's speech, Minority Leader Barkley, Democrat of Kentucky, interrupted to express his view that the like provisions of the Civil Aeronautics Act and the Shipping Act were irrelevant to the present issue. "Regardless of what the Congress may have done with reference to air lines and steamship lines, Congress long ago laid down the policy with respect to railroads, which it had a right to do," Mr. Barkley said. He added that Senator McFarland was "eminently correct in his statement that we are seeking in effect to cut the ground from under the Supreme Court in interpreting a policy which long ago Congress enacted." Senator Barkley was majority leader of the Senate last year, when the Democrats controlled Congress, and in that role he effectively blocked Senate consideration of the bill's predecessor, the House-approved Bulwinkle bill, which thus died with the sine die adjournment of that Congress.

In concluding his address, Senator McFarland predicted that, if the bill is enacted, the railroads "will promptly file motions for dismissal in both the State of Georgia and the Lincoln, Nebraska, cases, alleging that this bill legalized most if not all of the practices that are attacked in these actions at law."

Taylor Says I. C. C. "Fails"

The next opposition speaker was Senator Taylor, Democrat of Idaho, who indicated his lack of confidence in I.C.C. regulation of joint-action arrangements when he asked if the commission could be expected "to discharge additional duties when it has failed to discharge those assigned to it for over half a century." The senator went on to review the allegations of the government's complaint in the Lincoln case and to discuss "discriminatory rates." He predicted that if the bill were enacted the court cases and the commission's class-rate decision would be "swept aside." Also, he went over ground similar to that covered by Senator Tobey's case against the A.A.R. And he discussed the pending proceedings wherein the Department of Justice is alleging that the railroads charged unreasonable rates on shipments made by the Army and Navy during the war. In the bill, Mr. Taylor saw "a proposal to legalize cartels with the blessing of the I.C.C., a government agency whose chief testified last year before the Senate committee on interstate commerce that he regarded the railroads as his agency's 'clients'."

He was followed by Senator Hill, Democrat of Alabama, who said the measure "might well be designated as a bill to destroy the American free enterprise system." The codes which the railroads could set up, Senator Hill also said, would be "far broader" than those established under the National Industrial Recovery Act—the railroads "would be free to establish a government of the railroads, for the railroads, and by the railroads."

Praise for R. R. Young

Later on, the Alabaman praised at some length Robert R. Young, chairman of the Chesapeake & Ohio and Alleghany Corporation; he called upon his Senate colleagues to "think what a marvelous thing it would be if the railroads would do what Mr. Young wants them to do, instead of spending their money to send their lobbyists and lawyers and other representatives to Washington to fasten this gigantic monopoly cartel upon the American people, upon American industry, and upon American economic life."

Senator Hill indicated his hope for a veto by President Truman if the bill should be passed by Congress. "Fortunately for the people of the United States," he said, "there is in the White House at the present time a man who knows this subject. He spent many months as a member of the Senate, and, more than that, as a member of the Senate committee on interstate commerce, studying the subject, exposing practices and procedures of the railroads under the monopoly-cartelized system, exposing the evils and dangers to our economy and to our country, under this system."

Another opponent, Senator Murray, Democrat of Montana, saw "no need for haste" in acting on the bill. He could not agree that the proposal would establish "effective public control over the private collective action which it approves."

As part of his presentation, Senator Murray inserted excerpts from the government's brief in the Lincoln case, and the Childe reports to the Senate small business committee. Also, the senator complained about existing transit arrangements in the West, and about the failure of the railroads to adjust rates at Henry Kaiser's Fontana, Cal., steel plant when they adjusted rates applicable at the Geneva, Utah, plant of the United States Steel Corporation. In summing up he maintained that "we must not accept the bill unless we are prepared openly and honestly to go down the road of collectivism on which the bill sets our feet."

Among the amendments proposed by Senator O'Mahoney was one which would require the commission to hold public hearings on proposed agreements and to find, in approving agreements, that they would not be "discriminatory among shippers or geographical areas." Another would direct the commission to prescribe the rules under which agreements might be made, such rules to include provision "for the representation of shippers and interested state regulatory commissions or other authorities in hearings thereon." Still others would require congressional approval of agreements relating to the establishment or functioning of associations or organizations composed of two or more carriers, and bar bankers, banks, or other financial institutions from participation in activities of rate bureaus or other carrier organizations created pursuant to the bill.

Southerners' Fears

Senator Johnston, Democrat of South Carolina, was another of the opponents who contended that the bill would stop the Georgia and Lincoln proceedings. He reported that Elmer A. Smith, senior general attorney of the Illinois Central, had said in an article which appeared in *Railway Age* of August 4, 1945, that the railroads "must be permitted to charge reasonable maximum rates." Senator Johnston there identified Mr. Smith as the "chief counsel for the railroads in the Lincoln suit," although he had previously identified him as being "of *Railway Age.*" The article cited by the senator was Mr. Smith's review of the book entitled "Justice in Transportation," by Arne C. Wiprud, former special assistant to the attorney general.

Senator Johnston called Mr. Smith's statement "startling" because "in many cases, reasonable maximum rates are tremendously higher than reasonable minimum rates, both being compensatory and lawful." He went on to ask if Mr. Smith had not thus made it "crystal clear . . . just why he wants this bill enacted. The reason is that, under this bill, the carriers could get together and by reason of the economic and coercive power of their rate bureaus, could run the rate on a given commodity up to the very top of the zone of reasonableness and then could file it with the I.C.C., which would nearly always have to approve it because the commission has little power to change these privately-fixed rates when the rate is at the top, the bottom, or in the middle of the zone of reasonableness. Mr. Smith and his clients want all of them at the top."

In the next opposition speech Senator Sparkman, Democrat of Alabama, had much to say about the so-called Western Agreement which is the basis of the government's complaint against the western roads in the Lincoln case. He also had various specific complaints about rate-bureau activities, and he had received from Harry See, national legislative representative, Brotherhood of Railroad Trainmen, a memorandum expressing that organization's opposition to the bill.

The memorandum, which Senator Sparkman inserted in the Congressional Record, expressed the brotherhood's fears that the bill might supersede state safety regulations and "leave the railroad employees at the mercy of the Association of American Railroads."

NEW BOOK . . .

The Road of the Century, by Alvin F. Harlow. 447 pages. 8 in. by 5¼ in. Bound in cloth. Illustrated. Published by Creative Age Press, 11 East 44th street, New York 17. Price $4.

Once more Mr. Harlow has demonstrated his ability to turn out a most informative and readable book on railroad history. This story of the New York Central system is the second in this publisher's "Railroads of America series," of which the first was the same author's "Steelways of New England," reviewed in *Railway Age* of April 20, 1946. Comparison of the two books reveals the over all similarity in the organization and development of material that would be expected. If the newer book suffers at all from such comparison with its predecessor, that impression may be attributed partly to the greater familiarity of the story it tells—a result of the close attention publishers and writers for years have devoted to Commodore Vanderbilt and the railroads with which his family has been associated—and perhaps also to practical limitations on the extent to which many phases of the history of lines going into the Central system could be developed.

One way in which so many small railroads that eventually became the New York Central differed in origin and early progress from otherwise comparable pioneer lines in other parts of the country is that they were built to compete with, rather than to supplement, canals and water transportation. This was especially true in New York state, of course, where the Erie canal preceded the railroads between Albany and Buffalo, and where river steamers on the Hudson were doing a tremendous business years before rails were laid along its shores. As Mr. Harlow points out, some of the railroads that went into the original New York Central combination were not allowed to carry freight when they were first built, and the Hudson River railroad for some years saw the freight brought by rail to Troy and Albany go down to New York by boat during the months the river was open. The same sort of competition prevailed in Ohio, where canals were built in all directions, and to a lesser extent in Indiana and Illinois, and of course the rivalry between the railroads and the steamers on Lake Erie had much ot do with the fortunes of the pioneer lines in those states, and those in that stretch of Canada between Buffalo and Dctroit as well.

The first chapters of Mr. Harlow's new book deal succinctly with the development of the 12 little companies that became the first, pre-Vanderbilt, New York Central connecting Albany and Buffalo. He then tells, and very effectively and dispassionately, too, about the Harlaem and the Hudson River line and the maneuvers by which control of those properties fell to Commodore Vanderbilt and the steps that led to the formation of the New York Central & Hudson River.

Later in the book the author devotes some attention to the evolution of Grand Central Terminal—which the unappreciative local press at one time referred to as Grand Swindle Depot. He traces, also but briefly, the growth of the New York west side freight line from the days of the first, and unsuccessful, "dumb engines" down to the modern rebuilding of that property. Likewise, the contributions of Central men (George H. Daniels particularly) to the growth and extension of fast and comfortable railroad passenger service are outlined from the days of the "Gothic cars" with passenger compartments on two levels—that was more than a century ago—and the historic New York-to-Buffalo "Red train" of 1866.

A fair share of the book is given over to accounts of the rate wars and parallel track construction in which the Central and its growing competitors became engaged at intervals, to the stock market manipulations that figured so dramatically in the relations of these rival systems, and to the steady progress, under the Vanderbilt management, of the physical plant and equipment of the railroad and its ability to serve its territory.

There was not a great deal that is not pretty well known for Mr. Harlow to tell about the Vanderbilt period, and the growth of the Central itself under that control, although that did not prevent him from telling it clearly and entertainingly. But—perhaps because the colorful commodore was not playing the lead all through these acts of the drama—the stories of the Michigan Central and the Michigan Southern, the Lake Shore and the Bee Line, the Terre Haute & Alton and the Cincinnati, Jackson & Mackinaw, of Calvin S. Brice and Amasa Stone, Jr., of James F. Joy and George I. Seney (to name a few among many), are not so generally familiar, and in what Mr. Harlow tells of the careers of these railroad builders and stock salesmen, of these links in trunk routes and of their short feeders and parasites, there are many incidents that reveal the painstaking research and patient study the author has devoted to the compilation of a well-balanced and informative railroad history.

Stores Lead in Mechanizing Operations

Through studies designed to avoid handling and the utilization of mechanized material-handling equipment the Illinois Central's stores expenses have been reduced despite mounting labor cost*

By J. W. COCKRILL
Division Storekeeper, Illinois Central

THE constant rise of labor cost has made it necessary for the railroads to resort to improved methods, or means other than hand labor, for handling materials and commodities. This has resulted in the development of numerous forms of mechanical and motorized material-handling equipment. For a number of years railroads, and especially the stores departments, have taken advantage of the various types of tractors, cranes, trucks, motorcycles, platform lift trucks, etc., which have been available. Experience has proved that there is a field in railroad stores work for practically every type and kind of material-handling equipment on the market.

This, however, does not mean purchasing a machine to do every particular job. On the contrary, unless and until there is sufficient work of a nature to keep a machine engaged intensively enough to realize a substantial return on the investment in it, through labor savings, an endeavor should be made to adapt some other machine already available to the need in question, thereby bringing about *additional* savings through the use of equipment in service.

In our constant search for improved methods of handling, storing and shipping materials, the fork truck seems to lend itself to most flexible use. Indeed, noting the accomplishments of the stores departments with fork trucks, a number of railroads are now making experimental applications of these trucks to the handling of commercial freight through freighthouses.

Saving by Palletization

Palletization is in its infancy, so to speak, but it is destined to play an important part in the transportation and movement of commodities. Our purchase orders carry a notation requesting that shipment be made on pallets, where consistent. Manufacturers are beginning to cooperate and a number of items are now being shipped in this manner. Already we are realizing savings in the unloading of cars containing items so loaded. Thus, cars are being released at an average of one an hour with a fork truck and an operator, whereas the manual method formerly employed required approximately 16 man-hours. Conservative estimates of the savings in loading or unloading merchandise cars with mechanized material-handling equipment have been placed at 50 per cent. Furthermore, the potential injury hazard to employees is reduced materially through palletization, since there is less manual handling of the individual packages. In fact, we feel that the fork truck and pallet combination is an unbeatable time-, labor- and space-saving combination.

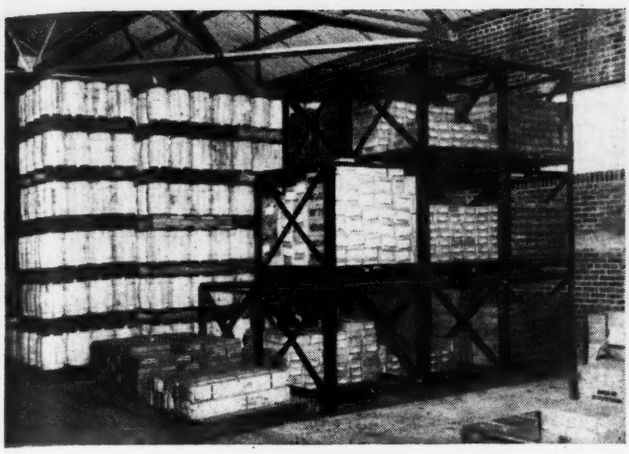
Palletized loading, plus mechanical material-handling equipment, have reduced handling and storage costs and accident hazards

I am advised that the division of simplified practice of the National Bureau of Standards is urging palletization on a national scale. This leads to the thought that those who may not be aggressive enough to do any of the pioneering in this field will eventually have the palletized movement of commodities forced upon them. To derive the most benefits from fork trucks and pallets and to realize the maximum in monetary savings and utilization of space, certain pioneering or experimental work must, of necessity, be done, together with considerable thought and study. In this connection, we owe a debt of gratitude to the Army and Navy for the information made available by them regarding their accomplishments in the use of fork trucks and pallets during the recent world war.

Certain difficulties are encountered in palletizing items of irregular shape, or items larger than the pallet on which they are stored, but an intensive study will prove that many of these difficulties are surmountable. To illustrate:

We have palletized, by means of flat pallets, cylindrical objects such as air-brake reservoirs of the "AB" type, by inserting an iron rod through each reservoir bracket. This method ties the load on the pallet and prevents it from rolling. Brake wheels are stored on edge with an iron rod through the center opening provided for the brake shaft. Box-car roof sheets are also stacked on edge, 40 sheets per pallet.

* Abstract of an address before the Second Annual Industrial Packaging and Materials Handling Exposition at Chicago on April 29.



Left—Interior view of the Illinois Central's new storehouse at Centralia, Ill. Background—kegs of rivets and nails stored on pallets. Foreground —welding rods placed in a basket-type pallet. Right—Roofing and fire brick are among the numerous items being shipped on pallets

A U-frame, made from scrap iron, mounted on, but unattached to, the pallet, holds the sheets on the pallet. This frame creates an overhang of 33 in. on two sides of the pallet, which still is accessible to the fork truck from the other two sides. Seam caps for box-car roofs are stacked flat on pallets and tied with steel strapping. These items also have a similar overhang on two sides, the other two sides being accessible to the fork truck. Dump doors for hopper cars, which are irregular in shape and do not lend themselves to flat stacking, are being palletized through the use of a few small wood blocks strategically placed so as to enable the load on the bottom to support the weight of the top pallet and its contents without distortion or hazard.

Brake beams are stacked on pallets in crisscross fashion and, since they are longer than 48 in. (the width of pallet), produce overhang on all sides. We have overcome this and are handling brake beams with fork trucks by means of extension arms placed on the forks. False floors for refrigerator cars, in approximately seven-foot sections, are also being handled with fork trucks, but without the use of pallets, through the use of the extension arm on the forks.

Palletized on Receipt

Numerous other articles, although not received on pallets, are palletized when they are unloaded, after which they are tiered, stored, shipped or delivered without further manual handling. These include draft gears, buffer castings, truck springs, side bearings, journal bearings, center plates, rivets in kegs, bolts in boxes or kegs, and numerous other items used in the construction of cars; also such bagged items as salt, soda ash, waste, cement, etc.

J. W. Cockrill

Each of the operations previously described permits tiering, as well as the delivery of the items to the ultimate point of use without further manual handling. All pallets are loaded uniformly with equal amounts of similar items to facilitate speedy and accurate inventories.

Trucks Need Good Roadways

The general use of fork trucks and pallets will, of course, require suitable and adequate, smooth-surface roadways and storage platforms, as well as ample headroom in warehouses. These features are being given the necessary consideration in all our plans for contemplated improvements of storehouse facilities. The I. C. has recently completed a new bulk storage or warehouse building at Centralia, Ill., which measures 50 ft. by 240 ft. in plan and has headroom clearance of 14 ft. Other facilities include a concrete storage platform, 75 ft. by 240 ft., located at the south end of the building, and a similar storage space located north of the building, yet to be paved. These two platforms will provide for the storage of palletized items which do not require warehouse protection. The new building is served by an unloading track extending the combined length of the building and platforms, with a car-floor-level unloading platform located adjacent to the building.

Stores Expense Reduced

Since approximately one-third the cost of operating the railroads is for materials and supplies—and the cost of handling these materials and supplies amounts to an enormous figure—we endeavor to plan the initial handling and storage of all palletized items to avoid any further or future handling, other than the simple movement of the loaded pallets by fork truck from point of storage to point of use or to the point of loading for shipment. We believe that the best way to reduce handling cost is to "avoid handlings." Testimony of our accomplishments along this line is the fact that, in spite of the staggering increases in labor cost during the last 30 years, store expense charges for handling materials on the I. C. have decreased three-fourths of one per cent during this period.

The statement has been made that there is a particular pallet to meet every need. We have been, and still are, experimenting with various types of pallets. However, in the meantime, we have settled upon a standard size—48 in. by 48 in.—double-faced with

bottom boards spaced so as to provide space for the drop wheels of hand fork trucks. We feel that, generally speaking, we must not overlook the importance of holding to a minimum the number of sizes of pallets to be placed in general use.

In our operations we have found a basket-type pallet very advantageous. This type is constructed with one open side, which enables material to be withdrawn from any, or every, pallet in the tier or row. It is also especially adapted to storing coated welding wire, tinware, pipe covering, brooms, scoops, ballast forks, dry-cell batteries of all kinds, and numerous other articles so fragile as to prohibit their being tiered on ordinary flat pallets.

Special Attachments Available

At the outset I stated that the fork truck was, more or less, the present-day answer to our prayers for improved material-handling equipment. A review of the industrial magazines or literature supplied by the manufacturers of these trucks will reveal the various attachments which have been devised for application to these trucks to convert them to uses other than for handling pallets

In addition to eliminating accident hazards, palletized loading of railway materials has lowered costs by as much as 50 per cent, resulting in reduced stores expense despite staggering increases in labor costs. Time required for loading or unloading a car has been reduced from 16 man-hours to just one.

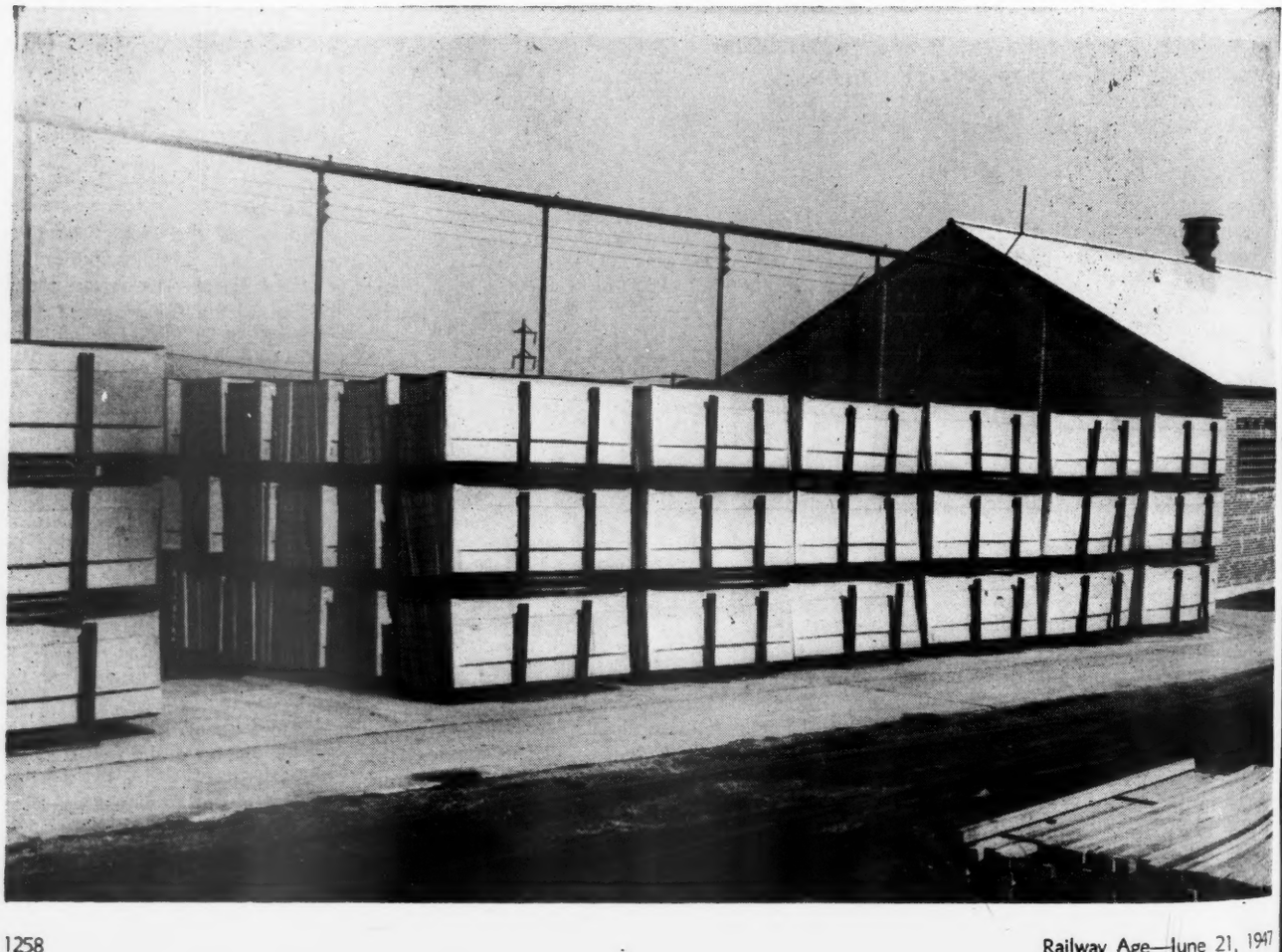
—such as an articulated load-carrier for moving long and unwieldy boxes, crates, sheets, etc., through narrow doorways; shovel-type scoops for handling bulk loads of fertilizer, foundry sand, ore, etc.; and rams for handling loose wheels, coils of wire, or other objects similar in shape. With a simple crane attachment rigged onto the forks, fork-lift trucks can be used also as light warehouse cranes. Devices are also available for pushing loads off the forks where pallets are not used, and many other improvements designed to make the fork truck more flexible as a material-handling unit.

We have had splendid success on our docks at New Orleans, La., in loading 330-lb. bags of imported sugar into box cars through the use of small fork-lift trucks equipped with specially designed forks, which enable them to move from under the load after it has been deposited in a car without the use of pallets and without damaging the bags. Specially-designed fork trucks were also constructed for the use of the Army and Navy to facilitate the loading and unloading of box cars. This type of truck will, no doubt, be of great benefit to the railroads in handling palletized shipments of commercial goods through freighthouses.

National pallet pools have been set up for carload and less-than-carload commercial shipments. They should eliminate some of the obstacles encountered in applying the use of the fork truck and pallet to commercial shipments.

Our present plans provide for the ultimate conversion of our platform lift-truck skid-box operations to fork-lift box-pallet handling, which will enable us to tier the box pallets with greater space savings than is now possible with skid-boxes. Furthermore, some damage is caused by the legs of heavily loaded skid boxes breaking through car floors. This damage can be eliminated entirely through the use of box pallets.

Box-car roof sheets, stacked on edge, are held on pallets by means of a U-frame mounted on, but unattached to, the pallet



A.S.M.E. Symposium on Diesel Design for Reduced Maintenance

Railroad Division considers this subject from the manufacturers' standpoint in a well-attended meeting at Chicago

AT the annual meeting of the American Society of Mechanical Engineers' Railroad Division in New York last December, one of the most constructive sessions was devoted to the subject, "Diesel Locomotive Design for Reduced Maintenance," at which the speakers were all railroad officers having extensive experience with this comparatively new type of motive power. Their comments and suggestions were broken down into four main subdivisions covering Diesel engines, electrical equipment, chassis and accessories.

A full opportunity for Diesel locomotive manufacturers to reply to these suggestions was afforded at a meeting of the Railroad Division, held as part of the semi-annual meeting of the society June 15 to 19 at the Stevens Hotel, Chicago. The Railroad Division session was on the afternoon of June 17.

Chairman W. C. Sanders, general manager, Railway division, of the Timken Roller Bearing Company, opened the meeting and introduced C. H. Beck, general sales manager of the Westinghouse Air Brake Company and chairman of the Railroad Division program committee. Mr. Beck presented Henry Urbach, mechanical assistant to vice-president, Chicago, Burlington & Quincy, who presided at the symposium.

Representatives of five manufacturers participated, with four formal papers as follows: a paper on electrical design by A. H. Candee, transportation engineer, Westinghouse Electric Corporation; a paper by Dana R. Staples, Diesel engineer, the Baldwin Locomotive Works; a paper by L. E. Endsley, consulting engineer, and W. W. Schettler, chief engineer, Fairbanks, Morse & Company; and a joint paper by J. W. Teker and M. D. Henshaw, General Electric Company, and John Seagren and S. B. Paul, American Locomotive Company. An abstract of Mr. Candee's paper appears in this issue and others will be published in subsequent issues of *Railway Age*.

Relief from High Electrical Maintenance Expenses

Electrical equipment of ample capacity, tonnage ratings within load limits and the introduction of a limited number of standards developed by an A. A. R. committee are suggested as possibilities

By A. H. CANDEE
Transportation Engineer
Westinghouse Electric Corporation

PROGRESS in the design of Diesel locomotives and their equipment is the result of a coordination of ideas by the designers and the railroad men who operate and maintain the locomotives. While the designers are usually in touch with technical developments and are ever alert to apply these to improve their products, no one sees the need for improvements better than those who are responsible for the continued operation of the locomotives and for keeping the operating and repair costs to a minimum.

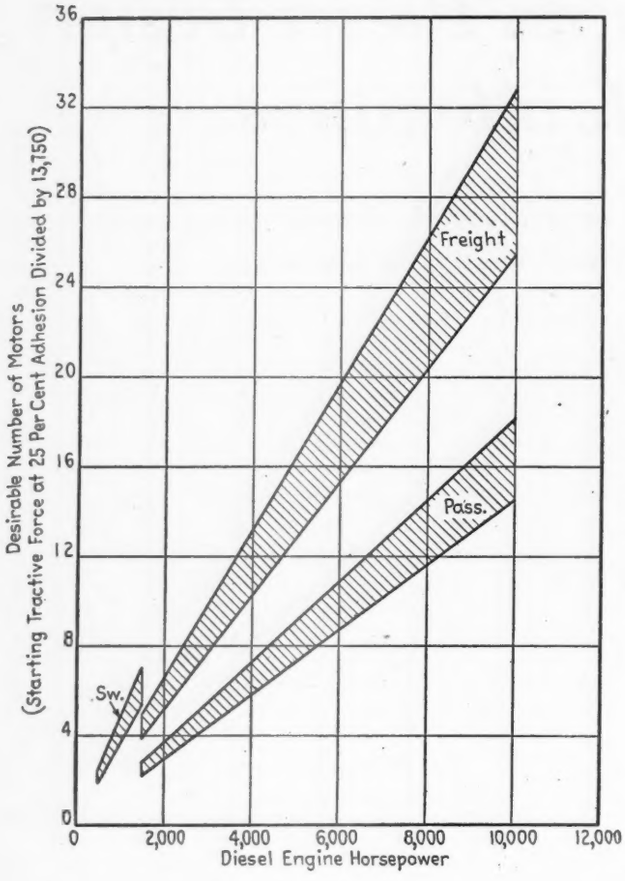
A review of the suggestions made at the A.S.M.E. forum last December which pertain to improved operation and reduced maintenance shows a wide variety of places where electrical improvement is needed. Many of these cover the method of installing electrical equipment while others concern the fundamental design of the equipment itself. There should be little difficulty in embodying some of the minor suggestions in current production lines, such as tagging wires and cables to agree with diagrams, stenciling control apparatus for easy identification, and similar proposals. Other suggestons are more difficult of accomplishment, since they require coordination between manufacturers or major changes in equipment design.

Two Major Suggestions Emerge

While many of the improvements suggested are desirable their effect in reducing maintenance costs is of a minor nature. However, two of the suggestions appear to be of major importance and were brought out by at least two of the speakers. These were: (1) increased electrical capacity, and (2) standardization of equipment. While the Westinghouse Electric Corporation has always advocated ample electrical capacity as a means of reducing road failures and electrical repair expense and is receptive toward standardization between manufacturers, we believe that one suggestion—that each manufacturer use but one size of traction motor—does not contribute to good engineering or railroading. Many road failures and high electrical maintenance expense may result with such standardization if this single motor type does not have adequate capacity for all services, as experience with "standardized" motors has shown. Lower costs will result from the use of two or even three motor types, each of adequate capacity for the service to which the locomotives are applied, since this should materially reduce the number of failures.

A New Approach

We have elected to approach the question of reduced electrical repair expense in a somewhat different way, based upon an analysis of the expenditures actually being made for different



Curve A—Desirable number of motors for best starting and low electrical maintenance based upon an axle load of 55,000 lb., adhesion of 25 per cent and a desirable starting tractive force of 50-65 lb. per hp. for switching, 20-25 lb. for passenger and 35-45 lb. for freight locomotives

operations comprising total electrical maintenance. In response to our inquiries, a number of railroad Diesel officers have been very helpful by taking the time and trouble to give us their judgments as to the division of electrical expenses for the different phases of electrical maintenance. From these data it appears that with the Diesel motive power now in use the electrical repair expense should average less than 25 per cent of the total locomotive repair expense. One railroad, which has had excellent maintenance results, estimates even lower electrical costs. For Diesel switchers they estimate that electrical repairs are 20 per cent of the total repair costs; for freight work 17.7 per cent, and for passcenger locomotives 15.7 per cent.

Of the total expense for electrical maintenance, the average estimated expenses may be divided as shown in the accompanying table.

Rotating-Parts Cost Highest

From the cost breakdown, it may be noted that armature rewinds, replacement of field coils, dipping and baking, and brush replacements account for approximately 42 per cent of the total cost. It is in the rotating equipment, then, that the greatest possibilities lie for the reduction of repair expense.

The life of rotating-apparatus insulation, the brush wear, and the probability of failure on the road are vitally dependent upon the electrical loads to which the equipment is subjected. While the electrical loading of Diesel locomotive equipment is always of a fluctuating character as a function of changes in grades and curvatures, the rapidty and severity of such fluctuations, as well as the electrical temperatures which are reached on the long, heavy pulls, are the major factors which determine the life of insulation and the repair costs of the rotating equipment.

Armatures are the greatest source of failures in the electrical rotating equipment. When short-time peak-current values are required for the purpose of negotiating an especially severe grade of short length, heat is generated within the armature coils which expands these coils excessively with respect to the rest of the armature, causing relative movement and chafing of the coil insulation. Likewise, heat may be localized in such places as the commutator necks and may soften the solder. While these peak-current values may be within the calculated or tested short-time rating values, repeated applications of such heavy currents will eventually result in weakened insulation. Brush life is also affected by these short-time peak-current values. Furthermore, it has been established rather definitely that the life of Class B insulation is halved for each 10 degrees Centigrade increase in operating temperature. Thus, lower operating temperatures will have a decided effect in increasing insulation life, reducing road failures, and lowering repair expenses. It is known to be a fact that many of the road locomotives now in operation have inadequate ventilation (primarily due to slippage of fan drive belts) and that the ventilating air is far too hot. As an immediate measure of relief, it is suggested that steps be taken to improve both of these conditions.

DIVISION OF ELECTRICAL MAINTENANCE EXPENSE

Maintenance operation	Per cent of total electrical expense
Inspection and cleaning rotating equipment	15
Brush replacements	7
Lubrication of rotating equipment	3
Armature bearings	5
Armature rewinds	25
Replacing field coils	5
Dipping and baking	5
Axle bearings	2
Pinions and gears	5
Control maintenance	12
Batteries	6
Miscellaneous (unaccounted)	10
Total	100

Larger Electrical Equipment

It is our belief that the best way to accomplish a major decrease in electrical repair expense is to use electrical rotating equipment of ample capacity. As often stated, it is also our opinion that a great many of the traction motors and generators now owned and operated by the railroads are too small. Westinghouse has consistently promoted the use of larger capacity equipment and has suffered financially from this policy in the competitive market, yet we are continuing to advocate the use of larger equipment since we believe it to be to the best interests of the railroads and the Diesel locomotive industry.

Electrical equipment must be applied and used well within its temperature limits. To use such equipment on the basis of its short-time overload capacity is to invite higher electrical repair expense. One of the characteristics of such apparatus is that damage which may be done seldom shows immediately. A dispatcher may think that he is getting the most out of the locomotive by loading it to the limt; actually he is shortening life of equipment and contributing toward high repair expense by so doing. There is also real danger of damage when the electrical equipmtnt is utilzed close to its thermal capacity on a short-time basis, since a reduction in engine power or loss of an engine will lengthen the overload duration beyond safe limits.

The use of electrical equipment within safe temperature values should prolong the life of insulation so that rewinds

are unnecessary over a long period of years. Likewise dipping and baking should not be necessary at less than four-year intervals. It might be stated here that dipping and baking is not a panacea except for the renewal of surface coatings which have aged and for possible tightening of coils in the armature slots. It may actually be detrimental when the electrical windings are repeatedly coated with a varnish, since such coatings impede the dissipation of heat from the windings and thus act to raise electrical temperatures. Furthermore, dipping and baking can seldom repair insulation which has been chafed due to thermal expansions or has been damaged physically.

We suggest, therefore, that railroads that have high electrical repair expense should investigate their tonnage ratings with a view toward reducing electrical loads by lowering tonnages and thus improving repair costs.

Other Important Suggestions

Returning now to the breakdown of electrical repair expenses, the second largest expenditures are for control inspection and maintenance. This proportionate expense seems out of reason, because the control equipment involves no large or expensive items and its maintenance should be routine. In the interest of keeping the control equipment simple, Westinghouse has advocated permanent traction-motor connections to eliminate transitions with their resultant electrical complications and increased maintenance expense. We have also applied the Autoload system of engine-load control, which is simple, yet extremely effective in accomplishing the basic results required for engine loading. Simplicity should be the keynote of all such control systems, and the introduction of complicated devices or those requiring delicate adjustments should be avoided if maintenance cost is to be kept to a minimum. We also wish to emphasize that serious consideration should be given before insisting that locomotive units of different manufacturers be equipped for universal multiple control because, as now built, even the various types of locomotives of one manufacturer may not multiply with each other. Such requirements inevitably result in increased complication and maintenance expense and may restrict developments of improved and simplified control systems.

One item of repair expense which deserves some consideration is that of batteries. Following the suggestions made at New York one manufacturer has laid plans to change from a 125-volt system to a 70-volt system for the sake of battery standardization. This is a definite step in the right direction.

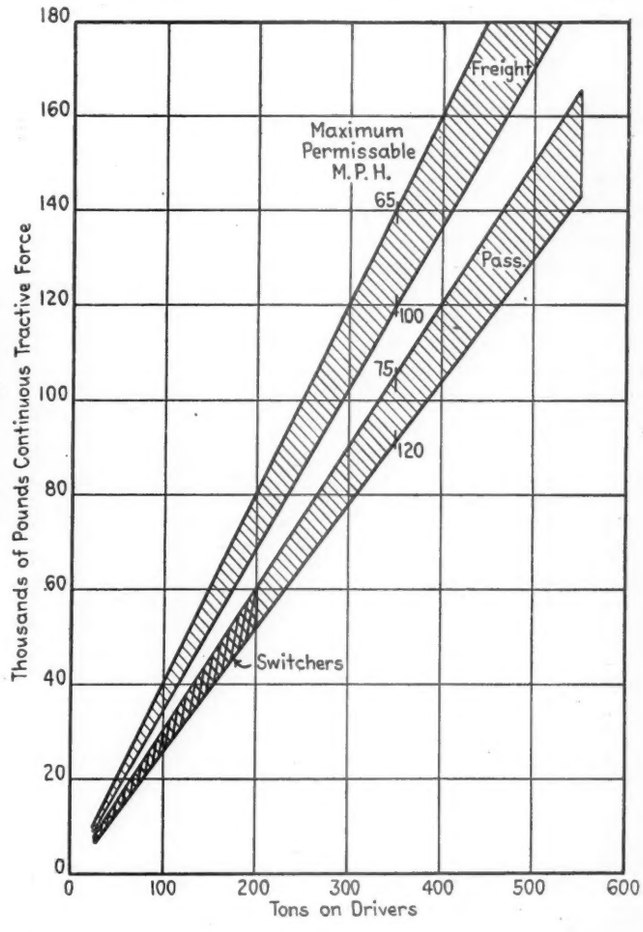
It was suggested that oil lubrication of traction motor armature bearings and main generator bearings be applied. This question is being given consideration. While it may be true that oil provides better lubrication than grease, it is also conducive to higher cost because bearings must be lubricated much more frequently than with grease. Furthermore, care must be taken to prevent dirt entering the housing, and to retain the oil lubricant. From the breakdown of electrical maintenance expenses, where lubrication is shown as three per cent and bearings as five per cent, these proportions might easily be reversed with oil lubrication, with no net saving in total costs. The service performance of oil-lubricated bearings is being watched with a great deal of interest.

Electrical Capacity Analyzed

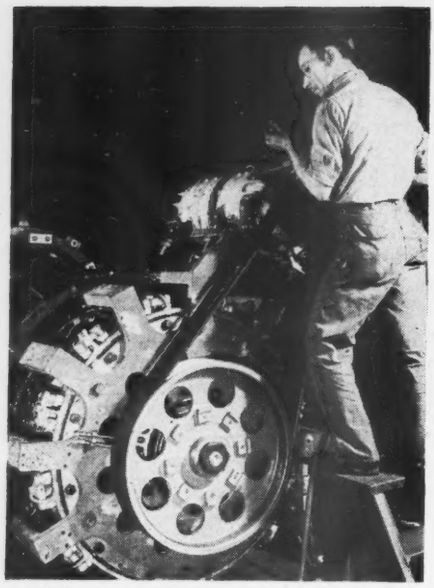
In discussing the desirability of increased electrical transmission capacities for Diesel locomotives, no mention has as yet been made of the actual values required for minimizing road failures and reducing repair expense. In order to place quantitive figures on the most suitable characteristics and capacities needed, an analysis has been made, based upon experience gained thus far in the operation of this type of equipment on the railroads. This analysis shows that one of the most desirable characteristics of Diesel motive power is its ability to start heavy trains smoothly by "leaning" against the train rather than by taking slack. This characteristic should be retained, and leads to a definition of starting tractive-force values based upon observations: yard switching, 50 to 65 lb. per Diesel-engine horsepower; passenger service, 20 to 25 lb. per Diesel-engine horsepower; freight service, 35 to 45 lb. per Diesel-engine horsepower.

In figuring starting tractive forces, values of adhesion between wheels and rails above 25 per cent cannot be expected as an all-weather conditon. Thus, for any given axle loading, the number of driven axles, or in other words, the number of traction motors required, may be determined. See curve A for a 55,000-lb. axle loading. It must be remembered, however, that Diesel-locomotive electrical equipment cannot be economically designed safely to haul continuously the maximum loads that can be started.

Experience is the best guide for determining the continuous tractive-force rating (fixed by electrical equipment



Curve B—Estimate of desirable continuous rating for Diesel-electric locomotives. The curves show ratings for minimum repair expense. The farther ratings fall below these curves the greater the risk of high electrical repair costs



A 1,500-hp. generator for a Diesel-electric locomotive under construction at the East Pittsburgh plant of the Westinghouse Electric Corporation

heating) of switching locomotives. It has been found that if this continuous rating falls between 13 and 15 per cent of the weight on drivers (13 to 15 per cent adhesion), such a locomotive is seldom overheated in normal yard or short transfer service.

Passenger service normally involves the maintenance of train speeds at relatively high levels. To meet this condition, locomotives are seldom loaded to operate at less than 30 per cent of maximum permissible speed on the limiting grades. Thus, for a locomotive geared for a top speed of 75 m. p. h. the minimum speed at which it may be expected to operate is around 20 to 25.5 m. p. h. Since the effective adhesive factor at this speed approximates 15 per cent for wet rail conditions, a continuous electrical rating at this adhesive value (upon which maximum tonnage ratings would normally be based) should make such a locomotive nearly self-protecting. However, with these same motors and with the locomotive geared for higher permissible speeds, the continuous electrical rating is reduced in inverse proportion to the increase in permissible speed and, even though the adhesive values decrease slightly as speeds increase, it requires more care in fixing tonnage ratings to prevent overloading.

Freight Locomotive Rating

Of the three classes of service, the electrical rating of freight locomotives is of the greatest importance, since tonnage loadings may vary widely and are controlled by yardmasters or dispatchers who may not realize the necessity of limiting tonnages if low repair costs and reduced road failures are to be attained. Where it has been the practice to load a steam locomotive nearly to the stalling point on the ruling grade, this cannot be done with Diesels. The operating officers must establish fixed tonnages and have the personnel adhere rigidly to such loadings, even though weather or rail conditions might appear to permit of greater tonnages. However, in negotiating the severe grades, it is reasonable to expect the Diesel to pull down to speeds as low as 15 per cent of its maximum permissible speed in the interest of obtaining practical utilization of the locomotive, and the electrical equipment should be built to permit this operating speed. With a 65-m. p. h. gearing, this speed might be somewhere around 10 m. p. h. on the limiting grade. Since the normal wet-rail adhesive value approximates 20 per cent at this speed, the continuous electrical tractive force rating for low-cost electrical repair expense should be somewhere in that neighborhood. As with passenger locomotives, when this same locomotive and electrical transmission equipment is geared for higher top speeds, the continuous electrical rating is reduced correspondingly and greater care must be exercised in establishing safe tonnage ratings. Curve B shows the preferred electrical capacities for switching, passenger, and freight Diesel locomotives, limiting lines of each band being based on maximum adhesive values expected when geared for the maximum speed shown.

High electrical repair expense frequently results from continuous operation at or near the maximum permissible locomotive speed established by the manufacturers. Unless the commutators are true and smooth, brushes do not always follow the surface of the commutators at high speeds with the result that surfaces roughen and brushes wear faster than normal. Flashing may also result, with expensive consequences. This condition is somewhat aggravated by loose definition of the term "maximum permissible speed." From the standpoint of motor rotational speeds, the difference is about 8 per cent between new and worn wheels. Maximum permissible speeds should be based on maximum motor speeds with the motors geared to worn wheels, and gearing should be applied to leave a 10 per cent leeway above maximum train speed. Some manufacturers use new wheel diameters as the basis for this figure, resulting in overspeed of the motors if operated at this speed when the wheels are worn.

We are of the opinion that much can be done to reduce Diesel locomotive repair expense and will cooperate to the best of our ability in accomplishing this end from the standpoint of the electrical apparatus. However, each locomotive builder and equipment manufacturer has his own methods of production and standards which cannot be readily changed. Moreover, they all face the problem of severe competition and the necessity of profitable manufacturing if they are to continue to serve the railroads in their growing need for this type of power. This unavoidable commercial aspect tends to bias the best judgment of the designing engineer because of costs, and locomotive builders can ill afford to furnish the most desirable apparatus while their competitors continue to supply, and the railroads to accept, apparatus of lower service capacity.

Standardization

It is obvious that it is possible and desirable to establish a limited number of standards for the construction of Diesel locomotives, particularly as to necessary margins in engine capacity, for electrical ratings, wheels and axles, electrical coupling details, battery sizes and compartments, and similar items. Such standards, of course, should be formulated by the railroads themselves after careful consultation with all locomotive builders and equipment manufacturers, since arbitrary standards might seriously limit developments and improvements of locomotives. In the growth of any industry, there is bound to be a wide diversity of opinion among engineers, which is a very healthy and stimulating influence, and only the prolonged experience of actual operation can prove the merits of one idea as compared to another. Nothing must be done to limit this type of progress at the present time.

It is suggested that the Mechanical Division of the Association of American Railroads might well appoint a committee charged only with the development of such standards and the publication of a Diesel-motive-power manual to which locomotive builders would be required to adhere in their products. This, in itself, would be a major step toward the reduction of Diesel locomotive repair costs.

Summary

It is our opinion that the greatest relief from high electrical repair expenses may be obtained by application of these principles:

1. The use of electrical apparatus of adequate capacity.

2. Strict adherence to tonnage ratings well within the capacity of the electrical transmission equipment.

3. The introduction of a limited number of standards so that all manufacturers will follow the same rules and electrical equipment capacity will not be sacrificed for the sake of commercial advantage.

Two future customers (above) of the railroad synchronize their watches with the "skipper." Enthusiastic young Americans (above, right) get some first-hand information on a modern steam locomotive. About 95 per cent of the boys never before have eaten in a diner, and find it the greatest joy of rail travel

Boys' Tours Prove Successful

SOME 2,100 young Americans, 80 per cent of whom had never before been on a railroad train, have recently been "guests" of the Chesapeake & Ohio on a series of boys' tours being conducted by the railroad. Six individual four-day tours have been operated thus far, at a fare of $10 per passenger, which includes all expenses. The stated purpose of the trips is threefold: to acquaint the boys with their country and its institutions; to give them a clearer understanding of their responsibilities as citizens; and to develop in these potential shippers and travelers an interest in railroads.

The C. & O. feels that the trips already conducted have been an outstanding success. In addition to the long-range benefits it anticipates as a result of them, an immediate and unexpected return on its investment has been the receipt of hundreds of requests for regular-fare group tours by high schools and organizations all along the system. The boys' trips have aroused adult interest in tours of this nature.

The trips are arranged through boys' clubs or Boy Scout groups at points on or adjacent to the C. & O. Each trip is limited to 300. The boys are chosen by the clubs or scout groups on a merit basis, any arrangements necessary with the parents being made by these organizations. The minimum age is set at 10 and the maximum at 17. Each special train is made up of six air-conditioned "imperial-salon" coaches and three dining cars. Two nights are spent at hotels, and a third night on the train, when free pillows and blankets are furnished. Six traffic department representatives and a doctor and nurse accompany each train, a standard Pullman sleeper being provided for their accommodation. The boys have been so keenly interested in the trips that no damage has been recorded, and at no time has either a doctor or nurse been called upon for service. The only discipline necessary has been a limitation of the number of meals each boy may eat at a sitting—diners appeal strongly to the teen-age "inner man."

On a typical trip, operated for the members of the Virginia Boys' Clubs, which originated at Newport News, Va., the following activities and points were covered: A tour of Monticello and the University of Virginia, at Charlottesville; a night in hotels at Huntington, W. Va.; a tour of the C. & O.'s shops and the Owens-Illinois glass plant at Huntington; a night at hotels in Detroit; a tour of the Ford Motor Company plant and the Edison Institute Museum in Greenfield Village; a trip across the Ambassador bridge to Windsor, Ont., returning through the tunnel; a night trip on the coaches; inspection of the U. S. Rubber Company synthetic plant at Institute, W. Va.

Groups originating at other points on the line see Newport News, Hampton Roads, the Norfolk coal docks, and other sights. Some trips have included Washington, D. C.

Industries along the line have shown much interest in the tours and have cooperated wholeheartedly in plant inspections. Governor Meadows of West Virginia, accompanied by Mayor Dawson of Charleston, personally meets all the groups at the station and conducts the tour through the state capitol building.

Schools have been most willing to cooperate, excusing the boys from classes on condition that they write an essay about the trip on their return. On one trip the C. & O. offered prizes, such as bicycles, for the best essay submitted. Results were excellent, with about one-third of the participants sending in essays, many of which indicate that a great deal of interest in the railroad has been aroused. Contests will be conducted on future trips.

Gratified with the success of the trips, the C. & O. intends to continue and expand their operation, and several additional tours are already scheduled.

I.C.C. Orders More Signaling on High-Speed Lines

80 m.p.h. routes must have automatic train-stop, or train control, or cab signals; 60 m.p.h lines require block signals

RAILROADS have been ordered by the Interstate Commerce Commission to install automatic or manual block signal systems on lines over which any passenger train is operated at a speed of 60 m.p.h. or more or any freight train is operated at a speed of 50 m.p.h. or more, and automatic train-stop or train-control systems or automatic cab signal systems on lines over which any train is operated at a speed of 80 m.p.h. or more. The commission's report stated that the block-signaling phase of the order will affect 18,586.5 miles of passenger track and a "relatively small" additional mileage over which passenger trains are not operated at speeds of 60 m.p.h. or more but freight trains are operated at 50 m.p.h. or more; the requirement with respect to train control or cab signals will affect 27,156.3 miles of track.

Can Cut Speeds

The commission recognized that the cost of such installations "would not be insignificant," but it went on to point out that "any respondent subject to the order which we enter may make such order inapplicable to it by making appropriate reductions in the speed of its trains." The averages of estimates before the commission indicated that automatic block signals cost approximately $6,000 per mile of road for single-track lines and $4,000 per mile of track for multiple-track lines. The cost of intermittent inductive train-control was put at $400 to $700 per mile of track in addition to the cost of the block signals, plus $2,000 to $2,300 per locomotive. The only estimate on cab signals was that of the Pennsylvania, which put the cost, in addition to the cost of automatic block signals, at $5,000 per mile of track for single-track lines and $4,000 per mile of track for multiple-track lines, plus $2,260 per locomotive.

The report was by Commissioner Patterson in Docket No. 29543, the proceeding instituted by the commission in May, 1946, for the purpose of determining whether the public interest required additional signaling and other safety devices on lines where trains are operated at speeds of 50 m.p.h. or more. The investigation also involved the question whether the definitions included in the Rules, Standards and Instructions prescribed by the commission's order of April 13, 1939, should be amended to include a revised definition of the term "medium speed" and to add a definition of the term "low (restricted) speed."

These modifications are made, the revised definition of "medium speed" being: "A speed not exceeding one-half authorized speed, but not exceeding 30 m.p.h." The added definition of "low (restricted) speed" is: "A speed that will permit stopping short of another train or an obstruction, but not exceeding 15 m.p.h."

In Line with Labor Views

The commission's findings are along the line suggested by the Railway Labor Executives' Association. On the matter of automatic train control or cab signals, R. L. E. A. had recommended that installation be required on lines where trains are operated at 70 m.p.h. or more, while it wanted block signals on all 50 m.p.h. lines. Meanwhile the railroads' position, as summarized by Commissioner Patterson, was "that sound regulation in the matter of signaling cannot be accomplished by an order of nationwide application because of differing traffic, geographical, weather and other conditions on the various railroads, but can only be accomplished by dealing with the various railroads individually, and that, while this record affords a basis for the entry of show-cause orders with respect to some respondents, it affords no basis for the entry of a final order of general application."

In rejecting this contention, the commission recalled that assurances had previously been given that "any respondent will, upon request made within 60 days after the entry of an order of general application, be given a hearing to show that it should be excepted from the order or the order modified with respect to it."

Commissioner Miller, in a separate concurring expression, cited this assurance as he called the requirements of the present general order "rather drastic." "It may be," he added, "that the effective date of the order will have to be postponed with respect to a number of carriers affected. When the time comes for passing upon petitions with that objective, it seems to me consideration will have to be given, not only to the volume of traffic but to the accident record and the financial condition of the respective petitioners."

Deadlines Set

As now promulgated the block-signaling phase of the order requires that when such installations are to be made on 100 or less miles of track, they shall be made on or before December 31, 1948. When such installations are to be made on more than 100 miles of track, they are to be made on not less than 25 per cent of the miles of track, with a minimum of 100 miles, on or before December 31, 1948. Thereafter a 25-per-cent-per-year, 100-mile-minimum, program is to be maintained until the work is completed on or before December 31, 1951.

When the required installations of train control or cab signals are to be made on 100 miles or less, they, too, must be made on or before December 31, 1948. "When such installations are to be made on more than 100 miles of track," the order continues, "they shall be made on 25 per cent of the miles of track, or 800 miles, whichever is less, with a minimum of 100 miles, on or before December 31, 1948; on 50 per cent of the miles of track, or 1,600 miles, whichever is less, with a minimum of 200 miles or the total miles, whichever is less, on or before December 31, 1949; on 75 per cent of the miles of track, or 2,400 miles, whichever is less, with a minimum of 300 miles or the total miles, whichever is less, on or before December 31, 1950; on 100 per cent of the miles of track, or 3,200 miles, whichever is less, on or before December 31, 1951; and on all the remaining miles of track on or before December 31, 1952."

Manual-Block Rules

Manual-block installations permitted under the order must conform to the following conditions: "A passenger train will not be admitted to the block when occupied by another train, except under flag protection; no train will be admitted to the block when occupied by an opposing train or by a passenger train, except under flag protection; and a train other than a passenger train will not be permitted to follow a train other than a passenger train into the block except when authorized by train order, permissive signal or prescribed form, and when such movement is so authorized the follow-

(*Continued on page 1269*)

Getting Record Wheat Crop Under Cover

Bumper harvest — estimated up 17 to 25 per cent — will tax facilities in time of record car loadings; wet weather concentrates load

UNFAVORABLE factors facing the railroads in the forthcoming movement of the winter wheat harvest in late June, July and early August are so strong as to warrant shippers and carriers labelling the job an "emergency." A special meeting called by W. R. Scott, executive vice-president of the Kansas City (Mo.) Board of Trade, on May 27, which was attended by the governors of Kansas, Nebraska and Missouri, and by important representatives of the governors of Texas, Oklahoma and Colorado, predicted an all-time record crop in the six-state "winter wheat belt." A later meeting of more than 200 members of the Trans-Missouri-Kansas Shippers Advisory Board in Wichita, Kan., on June 4, which, as is customary, was devoted almost exclusively to discussion of grain movement, saw "wheat running out of our ears from Kansas City to the Rocky mountains."

What Crop Will Be

With respect to the winter wheat belt, the following facts are controlling:

(1) The crop of wheat will be from 17 to 25 per cent greater than in 1946.

(2) The harvest will be concentrated into a smaller interval of time than ever before.

(3) Extremely low stocks of grain and flour everywhere will mean immediate buying and consequent long turn-around of cars to distant destinations.

(4) The government buying program for foreign relief of at least 500 million bushels will force large numbers of cars into time-consuming runs to ports.

(5) The railroads own 11,000 fewer cars than one year ago and have on hand 5,000 fewer serviceable box cars.

(6) Box car loadings of all commodities the first 20 weeks of this year have run 9 per cent above the same period of 1946.

The total crop for the six hard-winter-wheat-producing states for this year is estimated at 649,525,000 bushels compared with 514,185,000 bushels produced in 1946. Table I sets forth production for this area and for the entire country for the period 1930 to date. It reveals that the so-called winter wheat states—about which the railroads are currently worried—supply normally about 60 per cent of the country's total winter wheat, and that their proportion is increasing constantly.

Under the spur of a world's crying need for food the six-state area has planted an estimated 37,107,000 acres in wheat, compared with 32,698,000 planted in 1946 and an average plant of 23,743,000 for the years 1930 to 1939.

This record acreage and crop itself would create a handling problem for the railroads in the Southwest. To its great bulk must be added the influence which the combine has had in shortening the harvesting period in any given large area from the former three or four months to one or two weeks. As recently as 20 years ago, most grain was harvested by a reaper, bound, threshed and shipped, in turn, in an orderly process stretching over most of the summer. Today gangs of men move northward from the Mexican border to the prairie provinces of Canada in a wave which follows the progressive ripening of the wheat. Since 50 men and their machines can "do" 640 acres in a day, the harvest at any one point takes, at the most, two weeks. Consequently, as a normal fact of life, the railroads and the country (originating) elevators will always have difficulty handling the grain movement, in the opinion of many transportation men. In short, they must gird for the harvest as a warrior for battle—and do it every year. The more pessimistic railroaders and shippers at the meetings cited expressed certainty that the railroads couldn't possibly handle the harvest about to come and hoped that, at the most, they could get the bulk of the harvest under cover and out of the wet.

The abnormally wet weather of the past two months has delayed the harvest in the extreme southern portion of the winter wheat area from 10 to 20 days, so that, instead of being well under way the second week of June, it will be telescoped into the harvesting of the grain further north. This further concentration of the harvest will probably constitute the "last straw" in the impact of the grain movement on the carriers. Also, the floods which have been reaching record crests in the north central portion of the Mississippi valley in June will mean further delay to, and isolation of, badly-needed cars.

Elevators Nearly Empty

Stocks of grain and flour throughout the country are at a record low and the terminal elevators are virtually empty (Table II). Kansas City elevators are reported to be used at 4 per cent of capacity, and facilites in the country as a whole at 16⅔ per cent of capacity. This fact bodes both good and bad for the success of the carriers in handling this year's crop. On the favorable side, empty elevators mean big reservoirs to which the roads can shuttle the harvest quickly and go back for more. Then, after the grain is under cover, the roads can tackle the movement of the stored grain to mills or shipside in orderly fashion. This means of dealing with the crop has been dubbed ideal by carriers and shippers alike. On the other hand, the very emptiness of the elevators indicates that the grain likely will be

Table II—Total Commercial Grain Stock in Store Week Ended May 28, 1947, Together With Total Capacity of Elevators
(thousands of bushels)

Market group	Wheat in store	Total of all grain in store	Elevator capacity
Atlantic coast	168	7,823	41,920
Gulf coast	1,786	4,188	14,686
Northwestern and upper lakes	6,973	15,508	125,623
Lower lake	2,401	13,070	85,052
East central	647	6,069	25,578
West central, southwest and western	3,825	8,340	135,510
Pacific coast	1,406	3,719	21,156
Total, current week	17,206	58,717	449,525
Total, year ago	25,910	.....	.....

Source: T.M.K. board.

Table I—Production of Winter Wheat
(thousands of bushels)

State	Average of 1930-39	1942	1943	1944	1945	1946	1947*
Kansas	131,782	206,661	144,201	191,624	207,917	216,756	263,142
Missouri	27,594	9,035	12,649	21,998	22,518	18,780	23,205
Nebraska	41,059	68,760	60,165	35,009	84,226	89,723	98,578
Colorado	8,441	24,996	29,381	16,827	31,967	35,100	47,124
Oklahoma	47,981	57,370	31,711	85,914	70,917	88,262	98,715
Texas	31,360	47,438	36,366	71,558	41,779	62,916	112,425
New Mexico	2,437	4,498	2,079	2,795	2,034	2,648	6,336
Group Total	290.654	418,758	316,552	425,725	461,357	514,185	649,525
U. S. Total	570,001	703,253	529,606	758,930	823,177	873,893	1,025,789
Relation of group to U. S. total	51.0%	59.5%	59.8%	56.1%	56.4%	58.8%	63.3%

* Estimated production.
Source: Grain committee, Trans-Missouri-Kansas Shippers Advisory Board, W. R. Scott, chairman.

sold direct to centers of consumption, with the long hauls and delays to cars that by-passing the intermediate elevators entails.

Stocks are low because of price uncertainty and big government buying. Even in 1946, receipts of grain at Kansas City, for example, were lower than normal despite the record crop. Flour buyers have been holding back, awaiting lower prices. Old wheat is now selling at about 60 cents per bushel more than futures on new wheat are quoted currently. But now consumer demand must be met, and eastern millers have already bought heavily of the southwestern wheat still ripening on the plains. Since a trip to an eastern mill takes three times as long as a shuttle trip from country elevator to terminal or intermediate elevator, the car supply will be adversely affected by direct buying.

F. S. Keiser, associate director of the Office of Defense Transportation, is reported to have suggested the establishment of an embargo against cars moving grain out of the western harvesting area, to keep them in the latter until the grain is all under cover. But the consensus of shippers at the T. M. K. board meeting was against such a move on grounds that:

(1) You can't deny immediate consumer demand for bread; low stocks at eastern mills mean that most cars would have to be permitted through the embargo anyhow.

(2) Since the eastern mills will buy later from the East and Northwest, the winter wheat section must sell to them now, or never. Hence "the trade" itself is opposed to an embargo.

(3) An embargo would imply that millers are stockpiling beyond their needs; the record indicates the exact opposite to be true.

Effect of Government Buying

The proposed buying program of the Commodity Credit Corporation may reach 500 million bushels. Due to the urgent need for food to feed the starving peoples of other countries, the government will buy much of its grain direct from country elevators. This practice has the qualified support of the grain trade, which has criticized the former operations of the C. C. C. in "cleaning out" terminal stocks later in the season when cars were not available to refill them. But it means that many cars will be tied up in long port-bound movements instead of getting grain off the ground in short turn-around shuttle movements.

To overcome this handicap to the maximum extent, many shippers and railroaders suggest that the government ship the southwestern wheat to Gulf instead of Atlantic ports; that it ship cars in accordance with ship capacity; and that it store the remainder at intermediate and terminal elevators — which have plenty of space therefor—shipping later to the ports as ships are provided. Gulf ports are reported to have a capacity for about 400 cars of grain a day. J. J. Mahoney, general superintendent of transportation of the Atchison, Topeka & Santa Fe, expressed the hope at the T. M. K. meeting that the C. C. C. and the Department of Agriculture would "get right into the swing with buying and shipping and keep about 2,400 cars busy."

The Car Service Division of the A. A. R., has already requested the C. C. C. to forego one elevation in the process of getting its purchases to the ports; i.e., to eliminate one mixing and weighing. Exports in 1946 were about half wheat and half flour. The trade hopes the same proportion will be preserved in 1947, as serving to conserve the car supply.

Storage of Cars

For many years it has been customary for the large grain-originating roads to store large numbers of box cars suitable for grain loading in good time for the harvest, to keep the country elevators fluid and capable of turning over their capacity several times a day. The roads are doing their best in this regard this year, but, naturally, the high level of loadings of other commodities is making it difficult. In 1938, when the crop totaled only 340 million bushels, the western roads stored about 42,000 cars for grain loading. Now, with an estimated crop of 649 million bushels, they have on hand for grain loading about 20,000 cars, according to informal calculations.

On June 3, the following percentages of box car ownership on line were reported by the major wheat roads in the Southwest:

A. T. & S. F.	104
C. R. I. & P.	90
U. P.	71
M. P.	95
M.-K.-T.	104
St. L.-S. F.	67
C. B. & Q.	79

It is noteworthy that these percentages were built up in a short time from relatively low points. The Santa Fe, for example, increased its proportion on line from 79 per cent of ownership, as of May 1, to 95 per cent, on May 22, due to its own efforts and the distribution activities of the Car Service Division.

By the time this article is read, the percentages will have increased substantially. At the Kansas City meeting, the grain trade adopted a resolution to the effect that the western lines build up their car supply to 115 per cent of ownership by June 20; maintain that level until August 1; and thereafter hold 100 per cent on line until the end of the crop movement.

To this end, the meeting not only entered a resolution that the per diem charge be lifted from the present level to $6.15, but also that the roads utilize special-type cars for grain loading to the greatest possible extent. At the T. M. K. meeting the railroads' spokesmen declared that large numbers of automobile device cars would be thrown into the grain movement and the Santa Fe announced it would place 750 stock cars, slatted solid, into handling wheat and would add about 200 covered hoppers to the supply. This road has 8,000 liners on hand to condition cars for grain loading. Shippers were asked to keep these auxiliary cars in shuttle service and not let them get out of the territory. It was noted in passing that W. C. Kendall, chairman of the Car Service Division, has requested the roads not to use ordinary hopper cars for grain loading, as was done on an emergency basis last year, because the gtneral demand for "open-tops" is now almost as great as for grain cars.

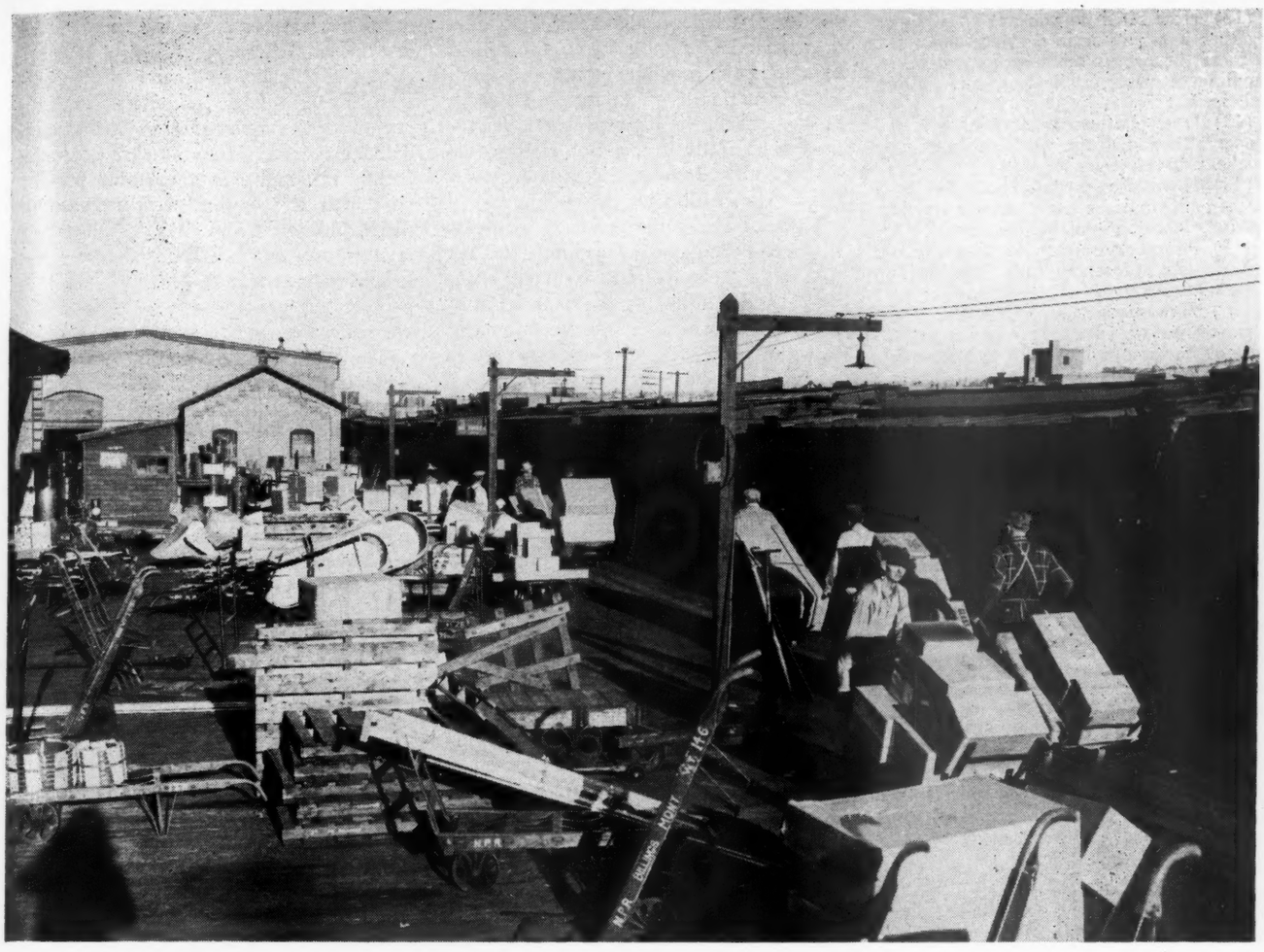
It was stated, in this connection, that the temporary covers to adapt hoppers to dry loading had deteriorated beyond saving.

Stretching the Car Supply

The railroads have available a number of additional devices to stretch out the car supply for the primary wheat movement. Noting that in the past terminals were congested Monday to Wednesday because of week-end accumulations, R., E. Clark, manager of the closed car section, Car Service Division, has asked the grain trade to load and receive grain seven days a week during "the big rush." The railroads, he noted, work all the time, and most samplers and inspectors of grain now work sunup to sundown. Although consignment grain must wait for trading floors in the grain centers to open—and therefore cannot be moved on week ends—some 25 to 30 per cent of loaded cars are destined to the line elevator of the company which operates the origin country elevator or are moved on contract, and can be moved any day of the week, he asserted.

The eastern roads are currently sending 1,600 box cars a day to the West. To enable adequate repairs to be made, the C. S. D. was instrumental in relocating on home roads more than 18,000 cars in the 16 weeks ended May 18, of which 11,000 were repatriated on western lines. Following the success of partial interchange equalization agreements in the three regions of the grain belt in 1946, roads in T. M. K. territory have agreed to maintain 100 per cent equalization at the following terminals during the periods indicated.

Terminal	Period
Kansas City, Mo.-Kan.	June 23—Aug. 15
Hutchinson, Kan.	June 16—July 31
Salina, Kan.	June 16—July 31
Wichita, Kan.	June 16—July 31
St. Joseph, Mo.	July 1—Aug. 15
Omaha, Neb.	July 11—Aug. 30



Agents Talk Over L. C. L. and Damages

Better working methods feature talks and papers at three-day Chicago meeting; Aydelott, Barber address large group

MORE than 500 railroad freight station representatives, meeting in Chicago last week, discussed and heard talks and reports on a variety of problems affecting the freight agent's job, ranging from the advantages of mechanized operations to better methods of preventing freight loss and damage. The meeting was that of the Freight Station section, Association of American Railroads, held June 11-13 inclusive, and was attended by agents from 36 states, the District of Columbia and provinces of Canada. Chairman and presiding officer was F. G. Love, manager property protection and safety, New York Central, at New York.

In the opening address of the convention, H. D. Barber, vice-president of the Erie, declared that the railroads have not gone far enough in trying to reach the local agent who is not employed in a supervisory capacity. He pointed out that the agent in the small town is an important citizen and can do a great deal more in advancing the good name of the railroads in his community than can his counterpart in the cities. The Erie operating vice-president then went on to set forth a 21-point questionnaire of station agents designed to reduce loss and damage at freight stations:

(1) Are you thoroughly informed on the requirements of the classifications as they pertain to the packaging of freight?

(2) Do you check the types of containers offered for shipment and see that they conform to the classification requirements?

(3) Do you reject shipments that do not so conform?

(4) Are your receiving clerks fully informed on the requirements of the Official Classification?

(5) Do your receiving clerks apply the requirements of the Official Classification?

(6) Are your receiving clerks rejecting shipments offered for transportation that do not conform to the requirements for proper packaging?

(7) Are your platform supervision and your freighthouse forces familiar with the rules prescribed in the "Recommended Rules for the Receipt, Stowing, Handling and Delivery of Less-than-carload Freight?"

(8) What type of examination do you conduct to determine whether or not your receiving clerks are fully qualified in the requirements for accepting shipments for transportation?

(9) Do you determine their qualifications in this respect before assigning them to a position as receiving clerk?

(10) Are their applications disapproved if they cannot pass a reasonable examination?

(11) Have you made certain that the people performing your storedoor pickup service are reasonably familiar with the requirements and are not accepting shipments that are improperly packaged for safe transportation?

(12) How often do you get your forces together in whole or in part and point out to them the proper methods for receiving, handling, stowing, delivering and billing l.c.l. freight?

(13) Does platform supervision give the proper attention to the work performed by truckers and stowers?

(14) How often do you check the loading of l.c.l. traffic as to the proper stowing, bracing, blocking and bulkheading?

(15) Are your freighthouse foreman and your assistant foreman fully informed on these matters?

(16) How frequently do you check the performance of your organization to determine how thoroughly they are observing the rules and regulations?

(17) The Freight Loading & Container section, A. A. R., has issued 40 pamphlets pertaining to the correct method of loading carload commodities. Do you have copies available to cover commodities originating at your station and have you consulted with and furnished copies to your shippers?

(18) How frequently do you check the cars which you may be loading or the cars delivered to an industry for loading to know they are mechanically correct to receive freight?

(19) How frequently do you observe the loading of carload traffic at your station by an industry or industries to know that they are conforming to the loading rules?

(20) If they refuse to conform, what action do you take?

(21) Do you regularly contact shippers and review with them their problems in connection with containers, loading, blocking and bracing?

Characterizing agents as "our principal public relations representatives" J. H. Aydelott, vice-president, Operations and Maintenance department, A.A.R., commented on the "pleasure with which certain parties in the country attack the railroad industry." He expressed the opinion that the attacks may be, in part, the fault of the railroads themselves in not presenting their case with sufficient persistence. A decline in the number of freight cars—a particular object of attack—the speaker attributed to: (1) Lack of incentive to buy cars in a time of declining traffic; (2) loss of traffic to trucks and waterways; and (3) a program of agricultural scarcity—"by government design."

Threat of Trucks

Asserting that the railroads need 100,000 new cars, and that they are now receiving fewer than 4,000 a month, Mr. Aydelott said that agents must continue to encourage good car utilization by observance of car service rules and good loading practices. With regard to the movement to place car service under the jurisdiction of the Interstate Commerce Commission instead of the A.A.R., he asserted: "Why anyone should think that step would improve the car situation I fail to see."

The speaker devoted the remainder of his address to a review of merchandise service, which he characterized as unsatisfactory in many respects. He reminded his audience that the registration of trucks last month increased 45,000 units over the previous month and alluded to the threat of a large mail-order house to acquire its own truck fleet—though basically it does not desire to do so—if both railroad and common carrier truck services do not improve.

One reason for the present congestion in freighthouses, according to the A.A.R. officer, is that so much space was abandoned during the depression or leased to forwarders. A second major cause of poor service is the shortage of labor in the larger cities, for which there is little hope of improvement. "Therefore, what mechanization can be done in freighthouses, ought to be done," he said. In this connection he noted that the A.A.R., in publishing new standards for box cars, will probably provide sufficiently strong floors to handle motorized loaders.

Job Training

H. A. McAllister, assistant to president, Erie, who is in charge of that road's "continuous Training Program," explained to the agents the fundamentals of "Job Supervision Training" and "Job Methods Training" on the Erie, his talk being supplemented by charts. At the outset the speaker made the observation that, "Training is going on on the railroads everywhere all the time, whether we will or not. The real question is whether this training is to be organized —under management's control—or disorganized." He went on to fill out the theme that the nub of the public relations problem of the railroad is "human relations," since only a successful inculcation of good employee performance will give to the public the service which, in itself, is the best form of public relations.

Speaking on the box car situation, C. R. Megee, vice-chairman, Car Service division, A. A. R., asserted that more "intensive supervision" is the most important step in obtaining increased car handling efficiency. In this connection, he said that car loadings for the first five months of this year were greater than any year since 1930, and were accomplished with 18,000 fewer cars than last year and a half million fewer than in 1930.

The speaker emphasized the agent's importance as "the one who comes in closest contact with all the customers of a railroad. The local agents and their forces . . . serve as the windows through which the public sees and gains its impression of the railroads." Urging the economical handling of freight cars, Mr. Magee told the agents: "Your contacts with the shipping public, your supervision of houses, transfers and carloading companies, offer opportunities every day. Start a car right and the chances are that it will go right."

Lewis Pilcher, executive vice-chairman, Freight Claim Division, A.A.R., reviewed the railroad's 1946 loss and damage record. He pointed out that the freight loss and damage account for last year was $94 million—an increase of $15½ million over 1945. "The most irritating of our failures is the so-called loss of entire package," he declared. "A shipper accepts no excuse for this, and we railroads cannot excuse it."

The work of the Freight Loading & Container section of the A. A. R. was outlined by Edward Dahill, chief engineer of that section. The section's work is allocated to three divisions, dealing respectively with packing material and containers for articles of general merchandise; methods of stowing; loading and bracing commodities and articles in closed equipment; and specifications and loading rules for fresh fruits and vegetables.

Referring to the use by railroads of pallets, the speaker said he believed their use would result in "a material reduction in loss and damage and pilferage, a material cutting-down of 'overs and shorts' and quick loading and unloading of house cars." He asserted that former Army, Navy and Air Force personnel, familiar with the use of pallets during the war, were promoting their use with the companies for which they worked.

Loss and Damage

The report of the loss and damage committee (chairman, A. E. Ward, agent, Milwaukee) stated in part: "In fair justice to our shippers and the railroad as well, we should make certain that our pick-up contractors and our receiving clerks are alert to their responsibilities by making sure they receive all the articles the shipping order calls for, that the markings agree in all instances, that no old markings remain on the packages, and that shipments are marked up to proper car to insure against misloading."

In a portion of the report advocating the use of bulkheads, it states: "All roads should agree on some uniform size and construction of bulkheads and put into a pool in sufficient number to protect all the merchandise cars they load to all stations." In the matter of proper inspection and reporting of loss and damage on carload and less carload freight, the report concluded: "The carrier should not send out a man to make inspections . . . who has not had some training to fit him to make a proper inspection, as his inspection and report not only have a bearing on future shipments but on claim payments as well."

Discussing station office operation, W. P. Heuel, auditor of station accounts

and over-charge claims of the Milwaukee, asserted that improvements in the way billing of freight shipments and expensing of waybills have not kept pace with those in other branches of railroading. He declared that "many aggravations sustained by our patrons can be avoided if we study ways and means of eliminating the transcription of one record from another."

The committee report on station office operation advocated the following: Adoption of a uniform practice whereby agents remit C.O.D. payments direct to shipper; formulation of policy of prepayment on all l.c.l. schipments; and establishment of a practice whereby the waybill or shipping ticket accompanies freight to the car so it may be corrected if the shipment is not loaded into car into which it was originally checked.

The committee on Station and Terminal Operation, (chairman, G. M. Murray, agent, Erie) asserted that 90 per cent of all employees must be trained on the job and that 80 per cent of a supervisor's job is training. With regard to safety the committee presented the results of a questionnaire sent to 133 station agents inChicago relative to safety programs already in effect. With respect to improving l.c.l service, this committee recommended that there be published a pocket booklet setting forth proper information with regard to the acceptibility of l.c.l. packages, for the information of truck drivers in pick-up and delivery service.

Committee Proposals

The committee recommended that the destination or break-bulk agent advise the loading agent under personal cover of exceptions that might lead to claims noted at time of unloading the car.

Regarding the high unit cost of loading l.c.l., this committee pointed to heavy loading of merchandise cars as a contributing factor and hoped for a decrease in cost when the supply of cars improves. With regard to mechanization, the committee expressed the opinion that all labor-saving machines are not adapted to handling l.c.l., but that fork-lift trucks are valuable for many types of shipments on ballast or skids, which are increasing in number. The report emphasized the necessity for good maintenance of platform equipment and recommended the employment of one or more good mechanics and the establishment of a shop therefor.

The final session of the meeting, devoted to station traffic, was addressed by C. G. Magruder, assistant general freight agent of the Pennsylvania, at Philadelphia, Pa. Touching on the advantages of pick-up and delivery service, the speaker asserted that the cost of such service is offset by a reduction in other operating costs. To handle the present volume of business without such service, he said, it would be necessary to expand facilities, with a resulting increase in expenses for additional supervision and switching.

The station traffic committee (chairman, G. R. Littell, terminal agent, Baltimore & Ohio) stated in its report that "the agent should always have in mind the fact that business goes where it is invited but remains only where it is well treated." The committee urged action to definte the responsibility of a consignee on part-unload cars.

Succeeding Mr. Love as chairman of the Freight Station section is J. L. Webb, manager of stations and motor service of the Pennsylvania, at Philadelphia. Vice-chairman is C. F. Allan, superintendent station service and weighing, Canadian National, Montreal.

I. C. C. Orders More Signaling

(Continued from page 1264)

ing train must proceed prepared to stop short of a train or obstruction, but not to exceed 15 m.p.h."

Among other evidence reviewed in the report was that showing figures on derailments and collisions during the 30-month period from January 1, 1944, through June 30, 1946. The commission analyzed those figures and found in them evidence "that generally not only does the ratio of accidents per mile of road decrease as the degree of protection increases but that this decreased ratio is accompanied by a material increase in train density." It is "well known," the commission added, that the possibility of accident increases "rapidly" as train density increases.

"It seems clear from what has been shown," the report continued, "that it is relatively very unsafe to operate passenger trains at 60 or more m.p.h. or freight trains at 50 or more m.p.h. by timetable and train orders only. The number of collisions and the ratio of collisions per mile of road are relatively high and the train density relatively low in such territory. It also seems clear, when train density as well as the ratio of accidents per mile of road is considered, that operation with automatic train-stop or train-control or automatic cab signals is safer than when these devices are not used. It further appears that operation by automatic block signals is safer than operation by manual block signals, notwithstanding that approximately 93 per cent of manual-block mileage is operated by signals supplemented by timetable and train orders, whereas approximately 39 per cent of the automatic block mileage is operated by signals only. The manual block rules of respondents are not uniform, which may account for the relatively less safe operation shown in manual block territory than in automatic block territory."

* * *

Benton Quarry Junction on the London & North Eastern (England)

GENERAL NEWS

Truman, Harriman Hail Seaway Project

President, in Canadian speech, sees plan resulting in trade expansion, economic growth

Declaring that it would prove beneficial to the raliroads in the "long run," although it would temporarily reduce their traffic, particularly in the East, Secretary of Commerce Harriman last week urged congressional passage of Senate Joint Resolution 111, which would approve the United States-Canada agreement for the development and construction of a "self-supporting" and "self-liquidating" St. Lawrence seaway and power project. Secretary Harriman expressed his views before a subcommittee of the Senate committee on foreign relations, which was scheduled to conclude hearings on the resolution with a rebuttal session on June 20.

Secretary Harriman's endorsement of the project came less than 24 hours after President Truman, in an address before the Parliament of Canada at Ottawa, declared that the United States and Canada, in order mutually to expand their trade and develop their assets to a maximum, must "share and . . . develop together" the "magnificent" St. Lawrence-Great Lakes system.

Looks Sound to Truman—"The St. Lawrence project stirs the imagination of men long accustomed to majestic distances and epic undertakings," the President said. "The proposal for taking electric power from the river and bringing ocean shipping 2,400 miles inland, to tap the fertile heart of our continent, is economically sound and strategically important. When this program is carried out, the waterway that is part of our boundary will more than ever unite our two countries. It will stimulate our economies to new growth and will spread the flow of trade."

Asserting that making the seaway self-sustaining should remove many of the objections which have been raised by those who viewed the project as government-subsidized competition, Secretary Harriman said that preliminary figures indicate that if the seaway were constructed at present prices, with interest at 3 per cent, the United States cost for the navigation phases of the project would total $255 million.

"Assuming similar increases for the Canadian construction work, the total costs of navigation phases would be approximately $415 million," he said. "With interest and amortization on net investment of 4.33 per cent plus cost of maintenance and operation, the annual charge would be in the neighborhood of $20 million, and the American share about $12,300,000. If interest on investment were computed at 2½ per cent, the total annual charges, including amortization in 40 years, would average $18 million. The American share would total about $10,850,000. There is, of course, a possibility that the cost will be less than the maximum indicated, since there may well be a drop in construction costs during the next few years."

Scale of Charges—According to Secretary Harriman, the seaway, under conditions of full utilization and relatively balanced traffic, could handle in excess of 40 million tons of traffic a year. "In discussing the traffic which might actually use the seaway," he continued, "I should like to make a distinction between general merchandise traffic . . . and bulk traffic . . . handled in shipload lots. This distinction is important, because under the terms of the resolution, different levels of tolls can be exacted for different types of traffic, and general merchandise traffic can absorb a much higher toll charge than can most bulk commodities. I am assuming that the general merchandise traffic tolls will be the maximum of $1.25 per ton permitted by the resolution. On bulk traffic, a much lower figure would be appropriate, ranging perhaps somewhere between 25 and 50 cents a ton."

Emphasizing his view that the seaway should be regarded from the standpoint of future as well as present needs, the witness said that it is not an "unreasonable assumption" that the Great Lakes area will utilize the seaway for general merchandise traffic to the extent of at least 10 per cent of the total United States foreign trade.

Predicting that water-borne dry-cargo exports and imports will total at least 60 million tons, Secretary Harriman said that, if prewar relationships are maintained, about one-third of that traffic would comprise bulk commodities handled in shipload lots.

"The remainder, or general merchandise traffic, would be in the neighborhood of 40 million tons," he stated. "Assuming that only 10 per cent of this traffic would move by the seaway . . . about 4 million tons of traffic would materialize, representing $5 million in tolls. In addition to American overseas traffic, there will undoubtedly be a substantial volume of Canadian general merchandise traffic and likewise some domestic water-borne traffic of this character can be anticipated. From these two sources, probably at least 2 million additional tons of general merchandise can be expected, raising the total to 6 million tons with toll charges of $7,500,000. These estimates may prove to be too low and it is

(Continued on page 1273)

Finish Argument in Rail-Water Rate Case

I. C. C. action may come before Maritime Commission's authority expires

Indicating that it may render a decision before June 30, when the United States Maritime Commission is scheduled to relinquish its operation of merchant vessels in coastwise and intercoastal service, the Interstate Commerce Commission last week concluded hearings and oral argument on those phases of its Ex Parte No. 164 investigation of water-competitive railroad rates pertaining to transcontinental rail rates, intercoastal water rates and all-water, water-rail and rail-water rates between Pacific coast ports and interior points. The commission's investigation also embodied all-rail commodity rates between California, Oregon and Washington, and Pacific coastwise water rates.

The water carriers, in order to reduce and possibly avoid prospective losses when they assume private operation, have proposed that the rail rates be increased from 5 to 50 per cent on various commodities. The railroads, on the other hand, have offered to increase, with certain exceptions, their rates to the full extent sought in Ex Parte No. 162, but which they did not receive.

What Is Rates' Purpose? — H. C. Barron, representing the transcontinental railroads, told the commission that it was "unbecoming" for the water lines to suggest what the rail roates should be. "Certainly," he commented, "the rail lines are not suggesting or intimating in any manner what rates the water lines should establish. In other words, the commission should recognize that each mode of transportation should stand on its own bottom, for certainly the law does not contemplate that one carrier should be required to maintain rates which would be unreasonably high judged by other standards for the purpose of protecting the traffic of a competitor.

Mr. Barron said that it was the railroads' contention that "our rates presently in effect are not so low as to not come within the zone of reasonableness." "Such rates," he said, "are reasonably compensatory in view of all the existing circumstances. Certainly the increased rates proposed will be compensatory and being so they will be remunerative in that they will cover the out-of-pocket cost of handling the particular traffic under consideration, including a return on investment." He added that "there appears to be no warrant" for the commission holding that

Finds Coordinated Railroading Works

All this fantastic nonsense about sinister domination of the railroads by an association, which is, in turn, dominated by some mysterious "they" in Wall Street and Washington, is just another example of the sort of demonology which is part of the stock in trade of the demagogue. To it there is one sufficient answer—the record of performance of the railroads and their servant, the Association of American Railroads.

It is true that in recent months, in this time of shortages of all sorts of things and services, the railroads have not been able to handle currently as offered everything that everybody wished to ship. But it is also true—and this is the important fact—that during those months the railroads have handled more tons of freight more miles than ever before in peace time. And it is equally true that the western railroads have done their full share in this record movement.

This record of peace time achievement, in 1946 and 1947, proves that the railroad men of war time, who successfully met the greatest transportation test of all time, who moved 90 per cent of our nation's war freight and 97 per cent of all organized military travel, have not forgotten how to railroad, and have not lost interest in doing the job.

Excess of Disparagement

This record of performance, of which shippers are part, is sought to be belittle and disparaged by an assortment of critics. The method used is familiar—the use of isolated instances, partial figures, misinterpretation of some facts, misrepresentation of others. The effort is to build up in the public mind an impression of a railroad industry ridden with sinister domination, shot with discrimination, in a state of collapse, or near-collapse, and in urgent need of a self-appointed savior, or saviors.

One example of the method is the picture which appeared in the Los Angeles Daily News over the caption, "Eastern Yards Full of Western Cars, and Western Mills Starving" which, upon examination, was found to be a photograph of the yard of the Santa Fe at Argentine, Kansas, made in 1937. The editor's attention was called to the error, but no correction was made.

But this remarkable feat of moving a Kansas freight yard clear over into the "East" in an effort to show discrimination against the West, is no more remarkable than that other bit of geographical juggling the other day, when a speaker before an audience here in Los Angeles shifted Chicago westward 488 miles, all the way to Omaha. The effort was to show such disparity in the mileage between Chicago and Los Angeles by two competing routes which have the same passenger train running time as to warrant the imputation of some sort of sinister collusion to deprive the public of the best service available. The effect of the effort was only to demonstrate geographical ignorance about railroads or carelessness with facts, or both, on the part of the speaker.

This Western Agreement, entered into in 1932, is one of the most misrepresented aspects of railroad operation. It has been pictured as a secret and collusive effort to stop progress on the railroads. It was nothing of the sort. It was not a secret but widely published. There was no collusion about it and that it did not put a "stop" or even a check to progress is indicated by the fact that in no years in all railroad history was there more progress than during the years in which the Western Agreement remained in effect, and in no section of the country was there greater progress than in the West.

The two greatest improvements in railroad passenger service since the introduction of the all-steel car are air conditioning and the streamlined train, originated in the west. Both of them came into wide use during those years, and in no section of the country were they more widely adopted than in the West and among those railroads which were signers of an agreement which has been misrepresented as an agreement to stop progress.

Despite very real technical and financial difficulties, the American railroads led the world in the commercial application of air conditioning. Air-conditioned railroad cars were in common use before air conditioning was common in commercial buildings, and by the time of the outbreak of the war, virtually all regularly assigned cars in through service had been air-conditioned.

Car Builders Are Busy

Much the same is the history of the streamlined train, which was pioneered by western railroads, members of the Western Agreement which was then in effect. Such railroads have had them for a dozen years or more. Many roads, in all sections of the country, had them by the time the war began. As soon as the war closed and passenger cars could be ordered again, the railroads placed orders sufficient to keep the car builders busy for the next several years, at last year's rate of production. Additional streamlined trains are coming into use as rapidly as the car builders can overcome production difficulties and make deliveries.

Nevertheless, the railroads are, in some quarters, belabored for their backwardness in not having more such trains, and in not forthwith scrapping everything they have and starting all over again. There is no zeal like that of one who, having fallen in belatedly at the tail of a parade, seeks by vociferation to create the public impression of leading the procession of progress.

The passenger business of the railroads is important. It is important to the railroads, both for the revenue it may bring in and for the friends it may make. There undoubtedly is a tendency on the part of the public to judge railroads in general by passenger service and little else. That in itself is good reason why railroads are at work to improve it.

But important as passenger service is, it is the railroad freight service which is at the foundation of the nation's economy. All of us are concerned with what is done with freight cars.

Events of the recent past have brought home to us anew that there is no substitute for railroads. We have had nothing resembling the general and prolonged car shortages which were common 25 and more years ago, before the shippers advisory boards were organized, and before the great modernization and improvement program of the railroads was undertaken. But we have had enough shortages to bring a realization of the importance of adequate rail transportation.

Meanwhile, it should not be forgotten that with fewer cars than they had in the 1920's, the railroads are moving—with the cooperation of shippers—more tons of freight more miles than ever before in peace time. The system under which this is done is not perfect. It will be improved, as practicable ways of doing so are suggested and developed. But as it is—and regardless of the campaigns to manufacture grievances, to breed distrust, to impair confidence—the system provides for the people of this country the most adequate, abundant and dependable transportation service on earth, produced by the highest paid railroad workers in the world, and sold at the lowest average rates in the world. That's not a bad system. It works.

—This article consists of exerpts from an address by Robert S. Henry, assistant to president of the Association of American Railroads, at Los Angeles, Cal., June 19, before a joint luncheon of the Pacific Coast Transportation Advisory Board and the Los Angeles Transportation Club.

railroad rates should be held at a particularly high level in order to preserve the water lines, nor should the water rates be held at a high level to preserve the rail lines.

"Whether or not the water lines could operate under private operation more economically than under government operation is not for the rail lines to determine or discuss," Mr. Barron continued in part. "We believe that there is a possibility that it might be so and it is our suggestion that the proposed rates of both the rail and water lines be permitted to be established and that they be given a

fair trial. If the water lines are convinced that such rates will not return sufficient revenues to enable them to operate profitably, they should . . . establish rates in tariff form to be effective at a sufficient later date so that all interested parties may have an opportunity to review such rates and orderly procedure may be followed."

In conclusion, Mr. Barron said that "within certain reasonable limitations," the public is entitled to reduced rates brought about by competition. He added, however, that there has been no showing by the water lines than the railroads' proposed rates, in full consideration of all circumstances, threaten the stability of the rail carriers.

Many Factors to Consider — J. E. Hennessy, attorney of the Western Pacific, contended that the water lines have proceeded upon the theory that present rail rates are so "unreasonably low" that they are in violation of Section 1 of the Interstate Commerce Act. Asserting that the proposed railroad rates should not exceed those sought in Ex Parte No. 162, Mr. Hennessy said that the water carriers have devoted their efforts to proposing "astronomical increases" in rail rates, adding that they have given no consideration whatsoever to the "various factors" that must be considered in the publication of a freight rate. Mr. Hennessy stated that such factors included market competition, dislocation of industry, truck competition and possible violation of the Interstate Commerce Act.

"They have decided upon a mathematical formula and then applied it arbitrarily to various rates without making an investigation or inquiry to determine whether the rates proposed by them for application to rail traffic would even move a pound of freight," Mr. Hennessy continued. "The results of their efforts, to say the least, are fantastic, showing increases in rail rates between California, Oregon and Washington ranging from 75 to 120 per cent of the existing rates." Mr. Hennessy also argued that one carrier should not be required to maintain unreasonably high rates for the sole purpose of "holding an umbrella" over its competitor.

The water carriers, represented by J. J. Geary, Pacific Coastwise Steamship Operators; M. G. deQuevedo, Intercoastal Steamship Freight Association; and William Radner, Gulf Intercoastal Conference, told the commission that, under the present rate structure, they would stand to lose approximately $80,000 per voyage when the Maritime Commission relinquishes its operation of vessels in coastwise and intercoastal service. At the same time, they contended that an increase of approximately 7 per cent in rates would tend to reduce the prospective losses by about $20,000 per voyage, adding that the remaining losses would have to be offset by profits realized in foreign trade. In this respect, however, they emphasized that not all private operators will participate in foreign trade.

See Private Operation at Stake — Declaring that the water carriers are in "drastic" need of rate increases, L. G. James, special counsel, Maritime Commission, said that their tariff rates must be raised "if the lines are to resume private operation with any hope at all of overcoming the substantial losses with which they are now faced." He said that achieving the return of the domestic shipping industry to private hands "transcends in importance" all other considerations before the commission "until such a time as the transition to successful and permanent private operation can be effectuated."

Although he stated that the proposed rate increases will not be adequate to permit profitable operation by the water carriers, Mr. James said that granting relief at this time would, nevertheless, be an "inestimable benefit" to private operation. "Action by the . . . commission in making these increases available to the water lines at the inception of private operation will encourage the water carriers to venture into the trade on July 1 in the hope that an ultimately sound and profitable operation can be accomplished," he said.

Counsel for the water carriers, observing that railroad officers often have contended that transcontinental rail rates were depressed by water competition, further argues that the commission should carefully study the present railroad tariffs, and, should they find them unreasonably low, require increases so that the water carriers also could raise their rates. They said that the railroads were, in many respects, the controlling rate-making factor in intercoastal traffic.

Shippers' Views — J. S. Burchmore, counsel for the National Industrial Traffic League, argued that the water carriers were seeking to have the commission initiate rates rather than review them. Along with Mr. Barron and several shippers' representatives, he contended that the water carriers should publish the rates they desired, with their proposals being subject to protest by shippers and commission investigation.

J. K. Knudson, Department of Agriculture counsel, renewed his plea that the commission should terminate the proceeding should it find that the water carriers rest on the proposition that their revenue needs can only be satisfied by the commission increasing rail rates for the sole purpose of underwriting subsequent increases in water carrier rates.

"One feature that distinguishes the coastwise case from the transcontinental case is the colossal extent to which some rail rates would be increased if the water carrier proposals were honored," Mr. Knudson said in part, adding that, under the water carriers' proposals, the rail rate on grain and grain products from San Francisco, Cal., to Portlnd, Ore., would be raised to such an extent that it would be "fatal" and "seem to fly" directly in the face of the Hoch-Smith Resolution, which directs the commission to hold agricultural rates at the lowest possible lawful rates compatible with the maintenance of an adequate transportation service.

Mr. Knudson said that he was also "impressed" by the fact that motor competition "seems to be as much a moving force" in the making of railroad rates as is water competition. "If this is so," he stated, "there would be justification for the truck lines to approach the commission seeking an increase in rail rates as there is for the water lines to do so. Once this precedent becomes established, there is no end to its results, except, of course, the good judgment and discretion of the commission."

Ceremonies Mark T. P. & W. Resumption

Resumption of complete normal service on the 249-mi. Toledo, Peoria & Western was observed on June 12 by ceremonies at the East Peoria (Ill.) yards of the line attended by some 60 newspaper men and shippers. Although through freight service has been in operation on the road on a limited basis since April 24, the departure of freight train No. 22 to Effner at 1:10 P. M. on June 12 marked the resumption of full through and local service.

Following these brief ceremonies, the guests made a round-trip of approximately 30 mi. in the road's two business cars to sample the character of the line.

Russel Coulter, recently elected president of the T.P.&W., said that more than 400 of the former employees of the road are back at work and that increased employment can be expected as rapidly as the road's freight business improves. Important in bringing about this aim is the reopening of 20 off-line traffic offices, all of which were closed during the protracted labor dispute which interrupted operations of the road.

May Ton-Miles

The volume of freight traffic handled by Class I railroads in May amounted to 54 billion ton-miles, an increase of 36.8 per cent above the corresponding 1946 month, according to a preliminary estimate by the Association of American Railroads. The A. A. R. noted, however, that the May, 1946, volume was affected by the 2½-day railroad strike and "other labor difficulties," particularly in the coal-mining industry.

The table summarizes revenue ton-miles for the first five months of 1947 and 1946.

	1947	1946	Per cent increase
January	53,294,374,000	48,225,789,000	10.5
February	48,485,909,000	45,080,780,000	7.6
March	56,148,921,000	52,393,533,000	7.2
April [a]	51,500,000,000	37,410,884,000	37.7
May [b]	54,000,000,000	39,464,673,000	36.8
Total five months	263,429,000,000	222,575,659,000	18.4

[a] Revised estimate.
[b] Preliminary estimate.

Sees Need for Transport Policy Covering Entire Industry

The paramount need of this country's economy is a national policy dealing with the transportation industry as a whole rather than with individual railroad and truck companies, water lines and air lines, Donald D. Conn, executive vice-president of the Transportation Association of America, said in Wentworth-by-the-Sea, N. H., on June 6. Addressing the annual meeting of the New Hampshire Bankers Associa-

tion, Mr. Conn added that surface carriers are being subjected to wholly incompatible theories of federal control. On the one hand, he said, they are required to comply with regulation and on the other they are being prosecuted under the anti-trust laws for carrying out the mandates and policies of regulation.

As a result of a series of conferences with members of the House committee on interstate and foreign commerce, Mr. Conn said, the Transportation Association has undertaken to resolve the issues of the transportation problem among the various economic groups in all areas through the voluntary mechanisms of the enterprise system and draft, for the committee's consideration, the essentials of a new national transportation policy. This new policy, he concluded, will be based, in part, on sixteen regional advisory forums composed of the outstanding leaders of agriculture, industry, finance and transportation.

Iceless Reefer Tested

Tests conducted by the United States Department of Agriculture in cooperation with various industry groups "indicate that an iceless refrigerator car can maintain temperatures of approximately 0 deg. F. under conditions of summer heat," according to a recent statement issued by the department. "This temperature, which cannot be reached by the ordinary refrigerator car, will maintain the prime quality of frozen foods," the statement added.

The car in which the tests were conducted has 3-in. insulation and is equipped with a split-absorption system of refrigeration. Tanks attached to the underframe of the car hold the refrigerant, anhydrous ammonia, under pressure. Cooling is achieved as the ammonia moves from the tanks through a single regulating valve and expands in the cooling coils located in the ceiling of the car. When the ammonia has completed its refrigerating effect, it is finally taken up by water in absorber tanks also attached to the underframe of the car. There are no moving parts.

The ammonia consumption rate during the test period—February 11-21, 1947—averaged 42 lb. per hour. During the tests a single charge of anhydrous ammonia lasted 46 hours.

The tests, conducted in a car-testing laboratory at Potomac yards, Alexandria, Va., were made with a car loaded with cartons of frozen tangerine segments. The car was placed in the test house on February 11, 1947. The air temperature inside the house was brought quickly to about 92 deg. and maintained at that temperature for the entire 10-day test. From the time the car entered the laboratory until Febuary 21, the temperature of the air and frozen tangerines inside the car was determined every two hours by means of remote thermocouples and electric resistance thermometers which allowed temperatures to be read without opening the car door. Test-house temperatures were also taken every two hours.

During the 10-day test the temperature of the frozen tangerines at the top of the load averaged from 4 deg. below zero to 1 deg. above zero. At the bottom of the load, temperatures ranged from 3 deg. below zero to 3 deg. above zero. The load of tangerines was hard-frozen when placed in the car. The load was still hard-frozen when removed at the end of the test period.

R. W. Brown Discusses Basis of Employees' Carelessness

"Over and above all accidents involving individuals and goods is written the word 'carelessness'," R. W. Brown, president of the Reading, said in Atlantic City, N. J., on June 9 in an address before the Medical and Surgical Section of the Association of American Railroads which met in connection with the annual convention of the American Medical Association. "And carelessness betokens a deficiency in the human being, either a physical deficiency or a mental or spiritual one. That this is true is reflected in total figures of American industry, including the railroads, which show that 80 per cent of employees discharged are dropped not for lack of skill, but due to physical ailments or defects of character. . . . Quite frankly, I do not believe that our physical examinations both before entering the service and while in the service are sufficiently rigid.

"Please do not understand that I am attempting to overestimate the importance of physical examinations," he told his audience. "There are many other human causes for accidents and failures in addition to physical defects. I spoke of carelessness. To this must be added the indifference of many employees, the lack of pride in work, the low degree of responsibility many are willing to assume and the shelter they believe they possess under union contracts. . . . I believe that carelessness, indifference, lack of endurance and inefficiency are engendered and provoked by some sort of a physical or mental deficiency to a large degree."

Safety, Mr. Brown concluded, will be advanced in the future, as in the past, through further improvement in track, engines, cars, signals and communications, shops and the other physical elements of railroad operation, through continued efforts in education and the enforcement of rules and regulations regarding train movements and through greater efforts to make safer men.

Truman, Harriman Hail Seaway Project

(*Continued from page 1270*)

possible that general merchandise traffic may reach or exceed 10 million tons and accordingly provide tolls of as much as $12,500,000."

Would Get High-Rate Traffic—Secretary Harriman said that the general merchandise traffic consists of commodities on which rail rates are relatively high and the transportation savings resulting from water movement proportionately great. "Moreover," he continued, "since a large portion of the traffic will originate or terminate in the Lake cities, additional transportation savings from reduced handling charges will be effected since one transfer will be eliminated. For overseas traffic in particular, there appears no question but that general merchandise traffic can bear a toll of as much as $1.25. Earlier studies have indicated transportation savings in excess of $5 a ton on general merchandise."

Secretary Harriman said that because bulk cargo, such as grain, ore and petroleum, "normally enjoy" relatively low transportation costs by other forms of transport, it is not believed possible to maintain tolls on those commodities at the same levels as for general merchandise. "Toll charges on the seaway must be sufficiently low so that elimination of transfer charges, plus the economy of utilizing larger vessels, will more than compensate the shipper for using the seaway in preference to using the small boats which can navigate the toll-free 14-ft. channel," he said, adding that bulk commodity traffic could pay tolls ranging between 25 and 50 cents a ton without diverting the business to the smaller boats. "Vessels moving through the seaway in ballast must also be charged relatively low tolls," he added. "A possible figure for these ships might be 15 cents per deadweight ton, although a careful examination might well lead to some different conclusion."

Secretary Harriman said that the importation via the seaway of foreign ores, particularly from Labrador, would constitute an "essential safety valve" to assure the lowest possible cost for the nation's iron and steel industry, as well as an alternate source of supply in case of a national emergency. "Since in years of peak production the steel industry around the Lakes already consumes in the neighborhood of 90 million tons of ore, it is apparent that should acute ore shortages develop in the upper Lake region, the question with respect to ore traffic on the seaway would be not how much traffic is likely to move by the seaway, but how much ore traffic can the seaway accommodate," he commented.

Thinks Tolls Would Suffice—According to the Secretary, toll revenues from the seaway after its first year of operation will "come close to meeting" the estimated $13 million a year necessary to meet interest and maintenance costs. He said that with the subsequent development of traffic, the toll revenues would exceed all costs, including amortization, which would result in a "great national asset eventually becoming available without cost to the taxpayer."

"There are other benefits . . . to be derived from the project," he asserted. "By making less costly the importation of foreign ores and raw materials, the seaway will ease the drain on our dwindling natural resources. By furnishing alternate sources of supply to the great steel industries located in the Lakes area, the seaway will bring an added degree of economic stability to the Lake industries. Finally, the seaway will enable the great midwestern area to receive more fully the benefits of international trade and to make a greater contribution to international trade, so essential to world economic and political stability."

Among other things, Secretary Harriman

contended that the seaway would result in making many Great Lakes cities world port centers. In this respect, he asserted that New York and other coastal cities which "monopolize port traffic" in this country should share their port incomes with the Lake ports.

Among others who appeared in support of the project were Lieutenant General R. A. Wheeler, chief of engineers, United States Army; W. E. Warne, assistant secretary of the interior; and Dr. N. R. Danielian, representing the National St. Lawrence Association.

Testifying that the project is "economically justified," General Wheeler said that the cost of completing the overall project has risen, because of changing price levels, from $455,086,000 in 1946 to $674,707,000 at the present. Of the latter figure, according to General Wheeler, the United States would contribute $491,609,000 and Canada $183,098,000. In 1946, General Wheeler estimated that the cost to the United States would be $310,274,000.

F. R. P. Members Top 14,000

The Federation for Railway Progress now has over 14,000 members, it was stated in announcing that Clifford H. Ramsdell has been appointed associate editor of the Federation's monthly publication, Railway Progress. In an article in the *Railway Age* of May 17, William C. MacMillen, Jr., president of the federation, said the membership at that time exceeded 12,000.

F. B. Foley to Head American Society for Metals

Francis B. Foley, superintendent of research of the Midvale Company, has been nominated for president of the American Society for Metals, according to W. H. Eisenman, national secretary. H. K. Work, manager of research and development of the Jones & Laughlin Steel Corp., was nominated for vice-president. Mr. Foley, whose nomination is tantamount to election, the announcement said, is presently A. S. M. national vice-president. When elected president, he will succeed A. L. Boegehold, a research executive of the General Motors Corporation.

Canadian Roads Oppose Longer Vacations With Pay

Eight Canadian railways, including the Canadian National and Canadian Pacific, in a brief filed recently with a board of conciliation in Montreal, Que., have opposed an application by unions representing approximately 65 per cent of their employees to extend to 14 working days the existing annual vacations with pay. If the application were granted, the brief said, it would involve extending the vacation period to cover a minimum of 16 calendar days for hourly, daily and monthly rated employees, compared with the present 14 calendar days generally in effect for monthly rated employees and the 7 calendar days for daily and hourly rated employees. The application was opposed because it is "unreasonable" and "beyond the ability of the railways to pay."

Presented to the board by H. D. Brydone-Jack, manager of the personnel department of the Canadian Pacific, and R. C. Johnston, director of labor relations of the Canadian National, the brief said the railways "cannot contemplate the increased expense that would be involved in this or other demands," and that even should their applications for increased freight rates be granted in full, they would still not be receiving sufficient revenue to enable them "with proper consideration for the needs of their properties and the just dues of the owners, to undertake such increased wage burdens."

RRs, Non-Ops Begin Wage Talks; Ops Shape Demands

Representatives of the nation's railroads and 17 non-operating railroad unions began negotiations on June 18 at Chicago concerning the latter's demand for a 20 cents an hour wage increase, which was served on the carriers last March 25 (see *Railway Age* of March 29, page 664).

The railroads are represented by three regional Carrier Conference Committees (eastern, western and southeastern), headed respectively by H. A. Enochs, chairman, executive committee, of the Bureau of Information, Eastern Railways; D. P. Loomis, executive director, Association of Western Railways; and J. B. Parrish, vice-president, Chesapeake & Ohio.

Chief counsel for the combined carrier committees is E. H. Burgess, vice-president and general counsel of the Baltimore & Ohio. The unions have created a national conference for the purpose of negotiating their demand, with G. E. Leighty, president of the Order of Railroad Telegraphers, as chairman.

Leaders of the five operating unions have indicated that they will present demands to the individual carriers about June 20, seeking essentially the same 44 changes in working rules which precipitated the two-day railroad strike in 1946.

Appropriation for C. N. R.

With little discussion the Canadian House has passed a bill authorizing the dominion treasury to provide money to meet $46,723,000 of capital outlay and capital debt incurred by the Canadian National during the calendar year 1947. This amount includes some $2,700,000 to be spent on the so-called Barraute branch in northeastern Quebec, to serve a pulp and paper development, and $430,000 as an installment on the Grand Trunk Western's part of the cost of changing that road's line between Pontiac, Mich., and Birmingham. Much of the remaining appropriation is for new equipment.

A.A.R. to Issue Overcharge Claim Directory

The Accounting Division of the Association of American Railroads will issue next month a revision of the Overcharge Claim Directory, to be known as the July, 1947, edition. The previous edition was that of April, 1945.

The announcement from Division Secretary E. R. Ford said that the directory will list non-member as well as member roads of the division. "It is primarily designed for use in the investigation and settlement of overcharge claims," Mr. Ford explained. "It is intended as an accurate index of the sources of information regarding rates and divisions, interline freight settlements, car movements, etc., and should be of specific interest to those officers and employees whose daily duties require constant reference to such data." One copy will be furnished without charge to each officer in direct charge of handling overcharge and agency relief claims, while additional copies may be obtained at 10 cents each from the division's office, Transportation building, Washington 6, D. C.

Freight Car Loadings

Loadings of revenue freight for the week ended June 14 were not available when this issue went to press.

Loading of revenue freight for the week ended June 7 totaled 900,747 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, June 7

District	1947	1946	1945
Eastern	166,623	151,174	162,532
Allegheny	195,627	159,400	194,838
Pocahontas	66,978	64,365	54,905
Southern	137,525	136,093	126,157
Northwestern	136,195	121,915	133,239
Central Western	131,233	130,537	134,565
Southwestern	66,566	66,644	78,422
Total Western Districts	333,994	319,096	346,226
Total All Roads	900,747	830,128	884,658
Commodities:			
Grain and grain products	45,064	43,176	53,011
Livestock	12,683	15,188	14,468
Coal	195,961	173,291	175,356
Coke	14,457	8,401	14,588
Forest products	46,440	47,135	46,547
Ore	80,490	58,493	72,741
Merchandise l.c.l.	117,242	126,946	108,294
Miscellaneous	388,410	357,498	399,653
June 7	900,747	830,128	884,658
May 31	830,383	626,885	837,886
May 24	890,605	571,473	882,753
May 17	888,208	688,210	868,914
May 10	884,242	684,942	838,764
Cumulative total, 23 weeks	19,027,831	16,409,977	18,634,574

In Canada.—Car loadings for the week ended June 7 totaled 79,165 cars, as compared to 81,158 cars for the previous week and 69,766 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
June 7, 1947	79,165	34,337
June 8, 1946	69,776	32,606
Cumulative totals for Canada:		
June 7, 1947	1,633,053	854,105
June 8, 1946	1,522,131	777,847

More General News appears on page 1293.

With the Government Agencies

Punitive Per Diem of $5 Is Proposed

I.C.C. examiners recommend rate would be charged for "delinquent handling"

Examiners Myron Witters and P. C. Smith of the Interstate Commerce Commission recommended this week that the commission should find that because a serious box car shortage is imminent, a per diem charge of $5 should be collected on box cars delayed in terminal or switching districts in excess of five days by "delinquent handling."

The examiners' proposed report was in the Docket No. 29670 proceeding—the investigation instituted by the commission to determine whether a $2 per diem rental charge for freight cars, other than tank and refrigerator cars, would promote greater efficiency in the use of equipment during periods of car shortage.

Their recommendation is set out as follows: "For a temporary period a per diem charge of $5 should be collected on box cars of foreign ownership held by one railroad in excess of five days in any terminal or switching district on the following cars: (1) cars held for placement for unloading, unless notice of constructive placement has been sent or given in accordance with the uniform demurrage rules; (2) cars awaiting removal from sidings after having been unloaded; (3) cars awaiting movement after loading is completed, except cars loaded with grain held for federal or state inspection; (4) cars awaiting interchange after tender by connecting lines; (5) cars held for prospective loading, except cars held or stored for the loading of grain; and (6) cars loaded with company material."

Exceptions—The $5 rate should begin, according to the report, after midnight of the fifth day and remain in effect until the cars are no longer detained, with the day of release to be included in the $5 rate. The examiners said that run-around cars—cars placed for loading or remaining in place after unloading and which are merely substituted for additional cars ordered for loading—should be exempted from the $5 per diem, as well as cars held for repairs, cleaning and conditioning. They added that the $5 per diem rate also should not apply in any instance where the delay in handling is caused by an "act of God" or strikes and that the day on which a car is subject to the $5 per diem charge should not be counted in making any per diem reclaim.

The proposed report was made public several days after the commission had received briefs filed by the Association of American Railroads, the American Short Line Railroad Association and the Office of Defense Transportation. The latter contended that the per diem during periods of car shortage should not be less than $3.50 for each day that a car is on a foreign line.

The A. A. R. said that a penalty per diem would not relieve the car shortage, adding that such a proposal is "without merit in fact or warrant in law." It said that the commission should reject the proposal and discontinue the proceeding. The short lines contended that the commission is without authority to issue an order requiring a so-called penalty per diem, adding that even though the commission had the statutory power, such an order should not be issued because no showing had been made which would justify its issuance. It said that it was "definitely shown" that such an order would not promote greater efficiency in the use of or increase the supply of cars.

Authority Cited—In reply to the A. A. R. motion to dismiss the proceeding for lack of jurisdiction upon the ground that the Interstate Commerce Act does not authorize the I. C. C. to prescribe a per diem charge which contains any element of penalty, the examiners, citing section 1 (14) (a) of the act, said that the statute expressly provides for penalties for non-observance of car service rules. The A. A. R. had argued that the commission's authority was limited to the terms of compensation for the use of cars and that it did not embrace a per diem charge which has any element of penalty.

With respect to exhibits produced at the hearings by the commission's Bureau of Service, in which it was shown that cars have been delayed by the carriers for various reasons for periods ranging up to 224 car-days, the examiners said that while many of the delays were unavoidable, many others could not be explained by the carriers. They added that of the 259 car-delay reports compiled by the bureau, the A. A. R. criticized only 20 8 per cent of those comprising the exhibit.

The proposed report said that the I. C. C. issued 673 service orders between January 30, 1942, and May 19, 1947, of which 354 were unloading orders. "Each order covered from 1 to 182 cars, some of which were requested by the carriers themselves, covering delays ranging from 20 days to 3 months," the report continued. "Under section 4 of the uniform bill of lading, carriers have the right to unload cars after the expiration of free time and the costs are chargeable to the owners of the shipments. If the carriers had exercised their right to unload these cars, such cars would have been released sooner and would have been available for loading."

(*Continued on page 1277*)

Short Lines Heard on Per Diem Charge

Proceedings before I.C.C., including western roads' complaint, to resume August 4

Hearings before Examiner Rice of the Interstate Commerce Commission on two per diem complaints—one filed by the short lines and the other by six Class I western roads—will be resumed in Washington, D. C., on August 4. The postponement was agreed to June 17, when the defendant carriers in both proceedings requested additional time in order to compile evidence based on a survey being conducted by the Association of American Railroads to determine, according to A. A. R. counsel, a "fair and compensatory" regular per diem rate. Results of the survey will not be made known until early next month.

Examiner Rice this week heard testimony from several witnesses for the short lines, which, in addition to assailing per diem rates which have been in effect since February 1, 1945, have asked the commission to cut the rate to 95 cents—or to other such basis as it may determine—and to award reparations retroactive to the latter date. The short lines' complaint, originally filed last July, as reported in *Railway Age* of July 27, 1946, page 142, and supplemented this week, had been set, after numerous postponements, for hearing June 17 together with the complaint filed last month by the six western roads, as noted in *Railway Age* of May 31, page 1143. The latter complainants, incidentally, are among the defendants in the short lines' complaint.

According to J. M. Souby, general solicitor of the A. A. R., the defendant railroads were prepared to offer evidence only with respect to that portion of the complaints which alleges that the present per diem of $1.25—it was raised from $1.15, effective June 1—is unjustly and unreasonably excessive. He said that the recently-filed short lines' supplemental complaint asks the commission to establish a "just and reasonable" maximum per diem rate, an issue on which he said the defendants were not prepared to testify until the A. A. R. survey has been completed. The short lines' complaint requests the I. C. C. to prescribe a formula to be used for the determination of the "just and reasonable compensation" to be paid by car users to the use of freight cars.

Short Lines' Position—J. M. Hood, president of the Short Line Association, and principal witness for the short-line complainants, said that a "just and reason-

able" freight car per diem rate is necessary and desirable. He said that a rate too low, in addition to being confiscatory, would eventually result in total ownership of too few cars, while an excessive rate, in addition to being a burden upon the car user, would eventually result in loading the industry with an unnecessary investment and other charges.

Mr. Hood said that there was "definite indication" at present that the ownership of commercial freight cars is at too low a level. At the same time, he said, there was no indication that the acquisition of freight cars is being retarded because of a "too low" per diem rate. "Orders for undelivered freight cars total more than a year's building capacity and by reason of financing requirements, such as approval being obtained from the I. C. C. for the issuance of equipment trust certificates . . . it is hardly possible to place orders for deliveries which cannot be obtained within a reasonable time, which should not exceed 12 to 15 months," he stated.

With respect to the economics of the replacement of 25-year-old cars with new cars of the same general type and class, Mr. Hood concluded that "the higher the per diem rate, the higher may go the repair costs before it becomes uneconomical to continue the old car in operation." He added that "it inevitably follows" that the higher the per diem rate, the more difficult it is to demonstrate the economic feasibility of the retirement of old cars and the acquisition of new cars.

Relation to Age of Cars—Pointing out that the same per diem rate applies, regardless of the age, capacity or class of the freight cars, Mr. Hood testified that, as of January 1, 1946, 13 per cent of the 1,770,852 carrier-owned fleet of commercial freight cars were 5 years old or less; 12 per cent were 6 to 10 years old; 20 per cent were 11 to 20 years old; 22 per cent were 21 to 25 years old; 14 per cent were 26 to 30 years old; and the remaining 19 per cent, totaling 330,563 cars, were more than 30 years old.

Mr. Hood said that car ownership by an originating short line would be feasible "although of questionable economy" if it were not for Car Service Rule 1, which prohibits the loading of a system car when a foreign car is available. "The total ownership of such a short line would, of necessity, comprise relatively few units of each class of car, and these scattered units would add to the reporting and maintenance problems wherever cars traveled," he stated. "If several hundred short line originating carriers owned cars of the several classes in series comprising a few units each, the total burden both upon the owning short lines and the user lines would constitute a material increase in the cost of doing business. As to the predominantly terminating lines, it would obviously be impossible for such a line ever to load any appreciable number of system cars, and, therefore, car ownership of a terminating short line or, in fact, a predominantly terminating line of any size, cannot be seriously considered under existing car service rules and practices in the use and distribution of freight car equipment."

Mr. Hood also denied that he "suggested or directed" the preparation by the commission's Bureau of Transport Economics and Statistics of a February, 1946, study, "Per Diem Costs of Car Ownership and Per Diem Charges for Freight Cars and their Calculations," which was summarized in *Railway Age* of March 9, 1946, page 521. Mr. Hood said that the study, interpreted by the short lines' complaint as one which shows "that the per diem charge of $1.15 per day is unjust and unreasonable," was "partly the result of informal conferences" between the parties to the complaint and the commission's Division 3. He also said that the study was made in connection with a prior petition filed by the Short Line Association in which it asked the commission, upon its own motion, to investigate the reasonableness of charges for the use of freight cars.

Hood's Formula—Mr. Hood said that a fair per diem rate could be based on a formula under which cost would be computed on the basis of a five-year moving average and the "active car day" used. Under the formula, the original per diem rate would be effective as of February 1, 1945, stated in multiples of five cents and redetermined year by year, effective January 1 of each year subsequent to 1945. He suggested that the five-year average be used for the second to sixth preceding years, inclusive, with the 1948 rate, for example, to be based on the 1942-46 inclusive average.

The witness testified that if the formula is to include active car days as a divisor, the commission may find it necessary to require by suitable order the rendition periodically, under oath by each respondent carrier, of returns from which accurate active car days could be determined.

William Wyer, chief executive officer of the Central of New Jersey, who also testified in behalf of the short lines, presented results of an ownership-cost study based on a group of 1,250 box cars. The exhibit showed an ownership cost of 95 cents per day. It also showed $3,926 as the average cost per car and 36 years as the average life.

Accounting Procedure — Lawrence Richardson, mechanical assistant to the vice-president of the Boston & Maine and mechanical assistant to the general manager of the Maine Central, testified that the "usual method" of accounting for freight train repair costs was inadequate for efficient control and analysis. He said that the bulk of American railroads follow the commission's prescribed practice which calls for the "minimum of detail" and "lumps" both inspection and repair costs in one item known as Account 314.

"Inspection is a function of operation," Mr. Richardson added. " It has no relation whatever to ownership. If trains are spaced irregularly or if unusual speed in inspection is required to expedite traffic, inspection costs will be relatively high. The demands of present day transportation have forced the speeding up of inspection so that one usually finds a lot of spot time between trains. By its very nature, this inspection should be charged to operation and not placed as a burden on repair costs, as is now done. The lumping of inspection costs in with repair costs appreciably increases the charges in Account 314. To get an accurate figure for repairs—a large factor in per diem—this inspection cost should be separated and deleted." At the same time, he said that the cost of wrecks and so-called "no bill" repairs are among other costs in Account 314 which are not related to ownership.

Mr. Richardson also testified that, on the basis of a statistical analysis which he prepared, 27.7 per cent of repair costs are non-ownership costs, adding that it "averages more" in the case of roads having a substantially greater number of cars on line than owned.

J. P. Nye, secretary-treasurer of the Short Line Association, presented a detailed explanation of the formula proposed by Mr. Hood. Contending that per diem is reciprocal and should include all of the cost during both good and bad times, Mr. Nye said that his study was made as a result of the increase in per diem from $1 to $1.15 on February 1, 1945. He said that the increased rate was not based on a fair formula producing a compensatory rate.

"I feel that the per diem rate should be based on a five-year average rather than a single year or a three-year average," he said. "The per diem rate will tend to fluctuate less if computed on the five-year average, and over a long period of time it will return the same cost to the car owners. It is true that the cost of freight car ownership has been rising . . . but the establishment of a fair formula will adjust the rate as actual figures become available. The per diem rate should not be based on estimates, but should be computed from actual statistics."

The Department of Agriculture, represented by J. K. Knudson, contended that there is evidence of disagreement among many of the railroads and their associations with reference to the problem of per diem and its relation to car shortages, and that the division in the ranks of the carriers has implications that " bode ill" for the impending need of the agricultural community for freight cars to move the 1947 produce.

$264,000,000 for Highways

The Independent Offices Appropriation Bill for the fiscal year ending June 30, 1948, which was reported to the House from its appropriations committee on June 13, carriers $264,000,000 for the Public Roads Administration. This would be $36,288,854 less than the $300,288,854 recommended by the Bureau of the Budget and $11,838,792 less than P.R.A.'s fiscal 1947 appropriation of $275,838,792.

The latter, however, included $30,838,792 for the "strategic highway network," repair of war and emergency damage in Hawaii, the Inter-American highway, and "access roads," work for which no fiscal 1948 appropriations were sought. Thus the cut made by the committee in the budget estimates would leave $97,711,146 ($247,711,146 as compared with $150,000,000) more for the federal-aid postwar highway program than has been available during the current fiscal year. The Bureau of the Budget had recommended $279,000,000 for that program, so the amount allowed by the committee reflects a cut of $31,288,854.

The only other reduction in the budget estimates was the elimination of the $5,000,000 proposed for grade-crossing elimi-

nation and protection work. The committee's report explained in that connection that all funds for grade-crossing work were not thus cut off, because funds provided for the postwar highway program "also will be available for expenditure in connection with grade-crossing elimination work." At hearings on the bill before a subcommittee of the appropriations committee, Thomas H. MacDonald, public roads commissioner, had pointed out that the law with respect to the postwar program provides that up to 10 per cent of funds made available for highways may be used for grade-crossing work. Thus the $5,000,000 had been in the budget estimate to take advantage of a specific authorization made before the present policy was established, and its elimination by the committee is not expected to affect projected grade-crossing programs.

In addition to the $247,711,146 proposed for the postwar highway program, the bill carries $10,288,854 for the rehabilitation and improvement of the present federal-aid system, $3,000,000 for secondary and feeder roads, and $3,000,000 for public-lands highways. These are the amounts recommended by the Bureau of the Budget.

Punitive Per Diem of $5 Is Proposed

(*Continued from page 1275*)

According to the examiners the evidence indicates that cars are being unreasonably delayed by the carriers. They stated that the present car shortage is the result of postwar demands upon an "inadequate and war-depleted car supply," adding than an "important factor" affecting the present supply was the "extensive and continuing" car surplus dating from 1930.

Terminating Lines Penalized—With respect to the A. A. R.'s contention that the imposition of a penalty per diem charge would result in inefficiency in the use of cars and decrease the supply of cars, the examiners said that the Chesapeake & Ohio, on the other hand, takes the position that the present per diem is inadequate and that it should be increased to a figure that would cover the full cost of ownership and maintenance of cars, thereby expediting movement and creating an incentive to purchase more cars. "However," the report said, "no definite figure is suggested."

The examiners said that no practical code of rules was propsoed by any party which would distinguish between instances of avoidable delay and instances of unavoidable delay in the handling of cars. "It is clear," they said, "that penalty per diem charge, if imposed, should have a direct relation to delinquent handling. A terminating line may normally have on its line a high percentage of cars in relation to its ownership. A flat increase in the per diem charge would heavily penalize such a railroad without regard to the efficiency with which it is operated."

The report also noted that in many cases a railroad often bears the expense of transporting an empty car and at the same time pays the per diem on the car without receiving any revenue from such equipment. "The injustice of an increased per diem charge with an element of penalty under such circumstances is obvious," the report continued. It also stated that while demurrage rules are so designed as to distinguish between reasonable and undue detention of cars, per diem rules have never been designed to distinguish between undue detention or delays in car handling.

"Efficiency" vs. "Justice"—"In times of car shortage, the Car Service Division of the association . . . endeavors to promote the direct movement of empty cars from the point of release to the nearest loading territory," the report stated. "The car service rules, as they apply to box cars, although not suspended, are not actually being observed and there is no penalty for their violation. In other words, foreign cars are being appropriated for loading largely in disregard of the car service rules. This probably results in the least empty car mileage in relation to the loaded car-miles. From the standpoint of efficiency in the use of cars, this policy cannot be questioned. However, it does not do entire justice to the railroads and to the shippers located on the railroads which own an adequate supply of cars as compared with other railroads which are not adequately supplied with cars, and are using the cars of foreign lines even for their local traffic, without regard to their expeditious return to the owner."

The examiners also noted that (1) there has been a continuing cooperative effort between the shipping public and the railroads for the past several years in the matter of efficiency of car use; (2) according to the railroads, service orders increasing penalties in the form of demurrage charges have had a beneficial effect in reducing car detention; and (3) one means of reducing empty car mileage is to forward cars to the territory where needed by the most direct route instead of returning them over the route of movement.

Appropriations Committee Cuts I. C. C. 1948 Budget

Appropriations totaling $10,611,100 to cover Interstate Commerce Commission activities during the fiscal year ending June 30, 1948, are provided in the Independent Offices Appropriation Bill which was reported to the House of Representatives from its committee on appropriations on June 13. This would be an increase of $88,400 above the $10,522,700 which the commission has had during the current fiscal year, but $1,286,900 less than the $11,898,000 recommended by the Bureau of the Budget.

With the reporting of the bill, the committee made public the record of hearings with respect to the appropriations which were held in April before one of its subcommittees. At those hearings, the I.C.C. presentation in support of the higher appropriations sought placed its main emphasis on the commission's expectation that its work load would increase because, as Commissioner Mahaffie put it, "a great many things which were suspended during the war will be brought up for attention now that the war is over." It was also stated that the commission has been falling behind in some of its work. Explaining why the commitee cut the amount proposed by the Bureau of the Budget for the commission, the report on the bill had this to say:

More for "Safety"—"The refusal of the committee to recommend the substantial increase for this agency during the next fiscal year is due to the fact that a very substantial increase was allowed for the fiscal year 1947. The committee does not feel that a further substantial increase is justified during the fiscal year 1948. However, in recognition of the importance of railroad safety and locomotive inspection work, there has been recommended slight increases in the budget estimates for each of these items."

Those "slight increases" are $25,000 for the commission's safety work and $10,000 for locomotive inspection, the bill thus providing for those activities $908,000 and $605,000, respectively, as compared with respective budget estimates of $883,000 and $595,000. Appropriations for the commission's other regulatory activities are now grouped in a "general expenses" item which the committee cut to the same amount that was provided for the current fiscal year—$8,868,100, or $1,267,900 less than the budget estimate of $10,136,000. The bill would give the commission $200,000 for printing and binding, $50,000 less than the budget estimate but $25,000 more than the fiscal 1947 appropriation. For penalty-mail costs, $30,000 is provided, $4,000 less than the budget estimate but $6,000 more than the amount allowed for the current fiscal year.

Appearing at the appropriations subcommittee's hearings along with Commissioner Mahaffie were Chairman Aitchison, Commissioner Miller, Secretary W. P. Bartel, Assistant Director Herbert Qualls of the Bureau of Motor Carriers, and Homer C. King, deputy dierctor of the Office of Defense Transportation. Mr. Mahaffie's general statement explained that the appropriation estimates for fiscal 1948 included no request for financing new functions or activities. The commissioner proceeded in his undertaking to justify the estimates by reference to the work and needs of the various commission bureaus.

Growing Litigation—As to the Bureau of Service, he said, funds are being sought to maintain a staff of 86, an increase of 18 over the 68 positions now authorized by commission appropriations. Mr. Mahaffie pointed out, however, that 107 persons are now engaged in the work of that bureau, but 41 of them are being paid from funds appropriated for O.D.T. "The growing shortage of serviceable freight cars and locomotives will tax the carriers to the utmost if they are to adequately meet the needs of shippers," he also said, adding that "this will require close supervision by the commission."

Mr. Mahaffie's testimony with respect to the heavier work load anticipated by the commission included his statement that "as a result of the displacements in recent years, we have probably the greatest aggregation of first-rate, big legal controversies, litigations, and readjustments pending that the commission has ever experienced." He thought it "safe to say that it is by far the greatest aggregation of major problems that we have ever had." By way of example, he mentioned the No.

28300 class-rate case and the No. 28310 investigation of the Consolidated Freight Classification. Chairman Aitchison explained briefly the status of those cases, and the subcommittee's interest turned to the car shortage.

Commissioner Mahaffie called that situation "very bad indeed," for "there are shortages all over the place." Commissioner Miller put the daily shortage at that time (April 18) "in the neighborhood of 30,000 to 35,000 cars." He added that the shortages were "pretty well distributed all over the country." Representative Coudert, Republican of New York, asked if it were "correct to say that the railroads are limiting their orders for cars because of financial limitations or prospective financial limitations." Mr. Miller replied that he could not say, adding, however, that "a great many of them are hesitating on that account." The commissioner also pointed out that the railroads do not know what the cost of equipment will be, because contracts contain escalator clauses.

Talk About Car Supply—Mr. Coudert then asked specifically if the Pennsylvania railroad had been "reluctant in its orders because of financial limitations." Commissioner Miller first replied that "they have placed some orders," and then told Mr. Coudert that "they have been [reluctant], I think." The commissioner also said he has been informed that some roads "are holding off because they are not getting enough rental for their cars." That question, he added, "is involved in one of those big cases that is coming up before us that Commissioner Mahaffie mentioned."

There followed a discussion of prospects for getting surplus steel from the War Assets Administration for car construction. Deputy Director King of O.D.T., recalled that the committee had been interested in that matter when O.D.T. was before it on a previous appropriation bill. At that time, O.D.T. "went back and took another look" at the W.A.A. situation, but got nowhere, Mr. King said. His own opinion is that a "good bit" of the W.A.A. steel "would probably be more expensive and more difficult to convert than it would be to obtain new steel."

Members of the subcommittee were also interested in the pending commission cases which involve competitive rate relationships between the railroads and domestic water carriers. Mr. Mahaffie explained that controversy, at the same time expressing his disagreement with Representative Thomas, Democrat of Texas, who had said that "if the situation is not remedied," the complaints of the water carriers "will become a loud scream . . . to get out from under the jurisdiction of the Interstate Commerce Commission."

"The troubles that they have now," Mr. Mahaffie said, "are not due to regulation, certainly not as far as their rates are concerned. There is nothing that we have done in that regard that could give them trouble. Their troubles are, as was expressed in their petition in these procedings, that their costs have gone up so much that they cannot compete. The railroad rates, so they say, prevent them from operating successfully. Getting out from under the commission's jurisdiction would not change that."

Earnings of Trusteed Roads — Mr. Thomas also asked Commissioner Mahaffie if railroads undergoing reorganization had not made enough money during the war to get out of bankruptcy. "They made very large earnings—many of them," Mr. Mahaffie replied, "but the difficulty is that they accumulated cash in part by not paying interest. Now, their inteerst is an obligation and it has to be settled before you can bring them out. The Missouri Pacific, for example, owes about $170,000,000 in back interest. . . . Now, that is partly the explanation of the apparent prosperity of the railroads in trusteeship; usually you find that it is because they have not paid their debts—they have accumulated obligations."

Later on, Mr. Thomas asked Mr. Mahaffie how the latter accounted for "the general increase in railroad accidents now." The commissioner replied that he did not account for it "as an increase," and proceeded to give figures showing that in 1946 there were 314 fewer killed in all classes of train accidents than in 1945, while the number of train accidents was down by 1,387. Here Chairman Aitchison called attention to the pending commission investigation to determine what signaling installations and safety appliances should be required on lines where authorized train speeds are 50 m.p.h. or more.

On the matter of personnel engaged in public relations work, the subcommittee was told by Secretary Bartel that the only commission employees assigned to such work are two clerks who distribute commission releases and answer inquiries with respect to such releases. "I wish you could get some of the other agencies to follow your example," said the subcommittee chairman, Representative Wigglesworth, Republican of Massachusetts.

Inadequately Secured Lading Fouled "American's" Track

Operation of a freight train "in which the lading on one of the cars was not adequately secured" caused the May 1 accident on the Pennsylvania near Warrior Ridge, Pa., where a steel plate projecting from a gondola cut into four cars of the New York-St. Louis "American" which was passing on an adjacent track, according to the report of an Interstate Commerce Commission investigation under the supervision of Commissioner Patterson.

The accident resulted in the death of 5 and the injury of 53 passengers. It occurred on the P.R.R. line between Harrisburg, Pa., and Altoona, 1,595 ft. west of the Warrior Ridge station (which is 29.6 miles east of Altoona), where there are four tracks designated from south to north as No. 1 eastward passenger, No. 2, eastward freight, No. 3, westward freight, and No. 4, westward passenger. Both trains were westbound, the freight being operated on track No. 3 and the "American," identified in the report as No. 67, on track No. 4. The accident occurred on a 3 deg. curve where the distance between the center-lines of tracks Nos. 3 and 4 is 12 ft. 1¼ in.

Automatic signals governing westbound movements on tracks Nos. 3 and 4 are mounted on signal bridge 2067, located 1,003 ft. east of the point of accident, these signals being of the position-light type and approach lighted. Also, cab signals and the "trainphone" train-communication system are in use in the territory.

Low Visibility—The freight, Extra 6744 West, consisted of a locomotive, 65 cars and a caboose. After having stopped at signal 2067 in obedience to a stop-then-proceed indication, it was moving at an estimated speed of 5 m.p.h. when a steel plate projecting from the seventeenth car fouled track No. 4 and was struck by No. 67. This was at 1:41 A. M. when, the report said, "it was misting and visibility was restricted to a distance of about 150 ft."

The "American" consisted of a locomotive and 15 cars in the following order: 1 mail car, 1 baggage car, 1 passenger-baggage car, 2 coaches, 2 sleeping cars, 1 dining car, 1 lounge car, and 6 sleeping cars. All were of steel construction. This train, running 35 min. late, had received a "proceed" indication from signal 2067; and it was moving at 57 m.p.h., its limit being 65 m.p.h., when it struck the projecting plate. It was not derailed.

The commission's investigation disclosed that the first mark on No. 67's equipment was a scraping mark on the left side of the cab of the engine immediately below the cab window. The handholds at the left gangway on the engine and tender were bent eastwardly and the left side of the tender was "slightly" scraped. The left side sheets of the first, third and fifth cars "were dented inward and cut near the tops of the cars." The left top corner of the vestibule at the east end of the third car "was torn loose and bent outward about 2 ft." The left side of the fourth car, in which the casualties occurred, "was sheared at the window line throughout the length of the car, and the interior fixtures on the left side of the car were demolished."

Third Train Involved — During its contact with the equipment of the passenger train, the steel plate became dislodged from the gondola, and finally became embedded in the ballast about 26 in. below the rails in track No. 1. Before reaching there, however, it had dislodged another plate which was part of the lading of another gondola, and that plate fouled track No. 2, derailing the locomotive of an eastbound freight which was moving there at a speed of about 5 m.p.h.

Members of the crew of Extra 6744 West were not aware of anything being wrong until after the accident occurred, when the engineer heard a warning to stop all trains being broadcast on the "trainphone" from the engine of No. 67. Extra 6744 West was stopped with its rear end 700 feet west of the point of accident. The first any member of the passenger train's engine crew knew of anything being wrong was when they heard an "unusual noise" at the left side of the engine, and the engineer made a 10-lb. brake-pipe reduction. Immediately afterward a stop signal was sounded on the communicating signal, and the engineer moved the brake valve to emergency position. This signal had been given by a brakeman from the rear end

of the third car when he heard "a sudden impact against the left side of the car." No. 67 stopped with the front of its engine about 6,000 ft. west of the point of accident.

Under P.R.R. operating rules, members of the crew were required to protect adjacent tracks, the commission's report said. It added, however, that the eastbound freight moving on track No. 2 had passed the rear ends of No. 67 and Extra 6744 West before those trains were stopped. As noted above, the eastbound freight was moving at about 5 m.p.h. when its locomotive was derailed, that restricted speed having been in compliance with indications on its cab signals which were thus actuated when the second steel plate shunted the controlling circuit as it fell on track No. 2.

Details of Lading—The steel plates were part of a shipment that had been loaded April 29 on three gondola cars at the Coatesville, Pa., plant of the Lukens Steel Company. The shipment was destined to East Pittsburgh, Pa., via the Reading and P.R.R., and the former delivered it to the latter in a cut of 47 cars at Enola, Pa., yard at 11:32 A. M. April 30. After various switching movements, the three gondolas were assembled in Extra 6744 West, which left Enola about 10:15 P. M. that night. They were the fifteenth, sixteenth, and seventeenth cars in the train, the seventeenth, from which the plate subsequently projected, being Reading 20575. It was of steel construction of the fishbelly underframe type, equipped with drop-end gates and wooden flooring, and was built in March, 1923. The total weight of the car and the lading was 135,396 lb. After the accident it was found that there was no side-bearing clearance on either side of the car, which "resulted in a solid 3-point bearing between the trucks and the car body," the report said, "and such rigid condition would transmit road shocks from the trucks directly to the body of the car."

The lading consisted of 14 steel plates which were loaded at an angle of 30 deg. to the flooring and in three piles. The piles at the west end and center consisted of five plates, and the pile at the east end consisted of four plates. These plates varied from 119 in. to 125 in. in width, 200 in. to 235 in. in length, and ½ in. to 1 in. in thickness. The plate which caused the accident was the bottom member of the pile at the west end of the car. This plate had moved upward from its original position, and the top east corner projected a sufficient distance outward from the north side of the car to foul track No. 4.

"When the plate came in contact with the engine and first three cars of No. 67," the report said, "it was pulled forward in a rotary motion, then the projecting corner became wedged against the front corner of the fourth car of No. 67. When this occurred, the plate was moved westward and it bent the end gate of its car outward, and the bottom west corner of the plate was forced outward through the south side of the car just above the floor line. Then the plate was rotated so that it extended into the interior of the fourth car of No. 67."

Loading Rules — Among the loading rules of the Association of American Railroads was one requiring that, when steel plates are loaded diagonally on gondolas, the bottom edges of the top plates must be in contact with the side of the car and rest on the floor, or on bearing pieces attached to the floor. Also prescribed were various supports, including metal anchor brackets to prevent upward movements of the plates. The specifications for these brackets required that they be attached to one of the other required supports and secured to it either by a ⅝ in. bolt or by a diagonal brace rod. The other end of the bracket extended over and downward on the top surfaces of the plates, but there was at the time no requirement that this overlapping end be secured. The commission's report said that, since the investigation of this accident, the A.A.R. has issued instructions requiring a ¾ in. rod extending diagonally across the top of the lading and secured to each anchor bracket and to the opposite side of the car near the car flooring.

The commission found that loading in the present case had been in accordance with specifications, "except that at the point where the anchor brackets were attached to the supporting posts there was a ⅞-in. nut and washer placed between each post and the bracket, and the bottom edges of the top plates were not in contact with the bearing pieces on the car flooring."

The overlapping ends of the brackets were found to have been bent upward and outward, and they "hung loosely."

A foreman of the P.R.R. car repair shop at Altoona, who inspected the car after the accident, told commission investigators that in his opinion the bottom edges of the top plates were not placed in contact with the bearing pieces on the car flooring when the car was loaded at the point of origin. As a result, he "thought," the weight of the top plates at the west end of the car was sufficient during movement of the car to force the bottom plate upward and that, since the overlapping ends of the anchor brackets were not secured, the two anchor brackets at the west end were displaced by the upward movement of the plate.

Previously, the report had noted that the loading foreman at the Lukens plant said he had inspected the car, and "was certain that it was loaded in conformity with the specifications." A foreman of car inspectors and a car inspector employed by the Reading said they inspected the car in that road's Coatesville yard, and they were "positive that the lading was in proper position and secured in accordance with the specifications." Two P.R.R. inspectors at Enola yard inspected the car when it arrived there, and found "no indication that the lading was not properly secured." Other P.R.R. inspectors at Enola inspected the car after the switching movements there, and the crew of Extra 6744 West made inspections of the train while it was moving and during a 20-min. stop at Denholm, Pa., about 50 miles east of the point of accident.

"At the time these employees made these inspections they found no indication that any of the plates had shifted," the report said.

Eastern L.C.L. Case Will Be Assigned for Hearing

The Interstate Commerce Commission has served notice that it will hold hearings on the petition filed recently by Official-Territory railroads for leave to publish short-form tariffs and for other relief necessary to pave the way for making effective their plan for increasing rates on l. c. l. and any-quantity traffic. As noted in the *Railway Age* of June 7, page 1184, the railroads sought to make the new rates effective not later than July 20, but the commission's notice would seem to preclude that.

The notice of June 16 revealed that the proceeding has been docketed as No. 29770 and assigned to the commission's Division 2 for administrative handling. The notice of hearing will be given later.

Hearings on R. E. A. Rate Boost to Be Resumed July 8

Hearings before the Interstate Commerce Commission on the Railway Express Agency's petition for additional rate increases will be resumed in Washington, D. C., on July 8, it was decided last week at the conclusion of a two-day session. The postponement was authorized in order that members of the commission's staff, together with representatives of the R. E. A. and the railroads, may examine cost studies pertinent to the proposed increases which were submitted by the R. E. A. and carrier officers.

As noted in *Railway Age* of June 14, page 1233, the R. E. A. seeks rate increases estimated to yield approximately $70 million a year which would provide, according to the agency, adequate compensation for services performed by the railroads in transporting express traffic. Commissioner Splawn is presiding over the further hearings in the proceeding (Ex Parte No. 163) wherein the commission has already authorized increases for the R. E. A. for a one-year period from last December 13. The latter increase is calculated to produce $58,900,000 in additional annual revenue.

The postponement was suggested by J. S. Burchmore, representing the National Industrial Traffic League, who contended that the exhibits and studies introduced by W. A. Benson, vice-president, accounting, R. E. A., and J. P. Cole, assistant to the vice-president of the Association of American Railroads, should undergo an "acid test." Mr. Benson's testimony also was noted in *Railway Age* of June 14, page 1233.

Mr. Cole introduced several exhibits which showed that there would be a shortage of approximately $42 million in revenues to cover costs if the railroads handled 180 million shipments at the proposed rates in a "prospective" year. At the same time, he said that a shortage of approximately $103 million to cover costs would exist if the railroads handled 200 million shipments at the interim rates in 1947.

H. J. Ward, deputy comptroller of the Pennsylvania, testified that in 1921 approximately 41 per cent of the payments to carriers for express service went to railroads in the eastern group, as compared to approximately 14 per cent in 1946. Those payments, according to Mr. Ward, repre-

sented 32.1 per cent of the 1921 revenue and 7.4 per cent of the 1946 revenue.

K. N. Merritt, vice president, traffic of the R E. A., told the commission that 1946 express rates in the South and West had been increased very little over the 1920 rates, adding that in some cases they had been reduced. Comparing parcel post and express charges, Mr. Merritt said that the latter were usually higher. At the same time, he said that many shippers and receivers did not ship on the sole basis of charges and used the R. E. A. because of certain advantages which parcel post could not offer.

Mr. Merritt said that it is anticipated that about 180 million less-than-carload shipments will be handled under the prospective rates in a "prospective" year, a drop of 20 million shipments from the anticipated 1947 level under the Ex Parte No. 163 rates. Comparing the 180 million shipments with 231 million in 1946 and 205 million in 1945, Mr. Merritt said that "it is thought that general business conditions throughout the nation will have more to do with the volume of traffic handled under these new rates than will the rates themselves." He added that the 180 million shipments should produce about $421 million in revenue.

"The proposed rates are what might be called judgment rates," Mr. Merritt said. "A greater revenue is needed from express traffic and we have attempted to create rates that in our judgment would produce increased revenue and still give recognition to competitive factors and the retention of traffic. The rates, therefore, are not made on a percentage increase or by the adition of fixed amounts over present rates, but rather, were created to produce revenue so sorely needed by the railroads."

Mr. Merritt said that the R. E. A. is presently seeking to increase only its first and second class rates, but at the same time is requesting that the interim increases in all other rates and charges authorized by the commission last year be continued without limitation.

Car Service

The I. C. C. has rewritten Service Order No. 68 which prohibits the furnishing of two small cars for a larger car ordered and suspends tariff rules which permit application of minimum weights lower than those provided for the car used, except flats. The rewriting was done by Amendment No. 14, effective June 13, which supersedes the previous 13 amendments, for it contains all their modifications of the original order. In addition, the amendment sets back the expiration date of the order from June 30 until December 31, and adds an exception which exempts cars loaded by railroads from the requirement that tariff charges must be paid on the basis of the cars used. At the same time, however, there remains the requirement that cars loaded by carriers "shall be loaded full or to their safe loading limit, except that when a single consignment requires more than one car the second or final car of the consignment need not be so loaded."

Agent Homer C. King under I. C. C. Service Order No. 562, on June 6, issued King's Order No. 14 which authorizes railroads affected by floods in Iowa, Missouri and Nebraska to reroute traffic by available open routes, subject to concurrence of the proper transportation officer of the receiving road.

The I. C. C. has issued Service Order No. 758 which prohibits railroads from allowing more than 7 days free time on gondola, open and covered hopper cars held for unloading in coastwise, intercoastal or foreign commerce at the point of transshipment from car to vessel or when held short of such transfer point. The order, which will be effective from June 23 until December 1 unless otherwise modified, suspends tariffs in conflict with its provisions, but stipulates that it is not to be construed to require or permit the increase of any free time now published in tariffs. Cars loaded with coal or coke are exempt.

I. C. C. Service Order No. 396, which requires the reconsignment of refrigerator cars within 48 hours from the first 7 a. m. after arrival at diversion point, has been modified by Amendment No. 9 which provides a new definition of "arrival." As used in the order that term now means "the actual time a refrigerator car loaded with perishables is made available for inspection; is placed on a hold track for diversion or reconsignment; or is actually or constructively placed for unloading."

The new definition also provides that whenever any one of these three events occur the other two "shall have no application to that car at that point."

I. C. C. Service Order No. 369, which provides for "super-demurrage" charges on closed box cars, has been modified by Amendment No. 13 which suspends the application of such charges to cars loaded with export, coastwise or intercoastal freight and held at or short of ports. The amendment becomes effective June 23.

I. C. C. Service Order No. 653, which provides for "super-demurrage" charges on gondola and hopper cars, has been modified by Amendment No. 6, which suspends the application of such charges to cars loaded with export, coastwise or intercoastal freight and held at or short of ports. The amendment becomes effective June 23.

Various service orders which had been scheduled to expire at this time have been extended by the I. C. C. until December 31. The orders and extending amendments are as follows:

No. 93, which provides for the use of giant refrigerator cars at freight rates applicable on the same commodities loaded in standard reefers. Amendment No. 11.

No. 95, which makes the manager of the Refrigerator Car Section, Car Service Division, A. A. R., the I. C. C. agent to control the distribution and use of refrigerator cars. Amendment No. 7.

No. 104 (fourth revised), which provides for the substitution of RS type refrigerator cars for box cars ordered for westbound transcontinental carload shipments. Amendment No. 6.

No. 107 (revised), which directs the Car Service Division, A. A. R., to control movement of U. S. cars into Mexico so that the movement in any month will not exceed the movement from Mexico during the preceding month. Amendment No. 4.

No. 112 (revised), which provides that no free time shall be allowed on refrigerator cars loaded with fresh or green fruits or vegetables held for movement from one location to another within switching limits of the same city or town except when released within 48 hours of arrival. Amendment No. 8.

No. 129, which suspends the operation of Section 2 of Rule 32 of the Consolidated Freight Classification insofar as it requires payment for body ice taken from refrigerator cars by consignees. Amendment No. 4.

No. 135, which increases demurrage charges on carload export traffic held at Mexican border points. Amendment No. 5.

No. 180 (fourth revised), which provides for "super-demurrage" charges on refrigerator cars. Amendment No. 14.

No. 260, which prohibits the salting of ice in refrigerator cars loaded with citrus fruits in California, Arizona, Texas or Florida. Amendment No. 8.

No. 394, which restricts the free time on refrigerator cars in both domestic and export service. Amendment No. 11.

No. 396, which requires reconsignment of refrigerator cars within 48 hours from 7 a.m. after arrival at diversion point. Amendment No. 8.

No. 436, which requires railroads to pull empty refrigerator cars within 24 hours after unloading and to forward promptly to loading territory. Amendment No. 5.

No. 498, which requires the Southern Pacific to divert to the Pacific Electric at Colton, Calif., traffic moving to Los Angeles Harbor and Long Beach. Amendment No. 3.

No. 558 (revised), which authorizes the use of refrigerator cars for shipments of fruit and vegetable containers and box shooks from southern Oregon and California to destinations in California. Amendment No. 3.

No. 689 (revised), which directs the Belt of Chicago and Indiana Harbor Belt to return empty refrigerator cars to connecting lines as ordered by the commission's refrigerator car agent. Amendment No. 1.

Organizations

The **Transportation Association of America,** Chicago, has announced the election of the following members to its board of directors: A. G. Anderson, general traffic manager, Socony Vacuum Oil Company, New York; J. A. Quinlan, vice-president, St. Regis Paper Company, New York; B. M. Seymour, president, Associated Transport, Inc., New York.

A "fan" trip from New Haven, Conn., to Hartford via Saybrook and the "valley line" of the New York, New Haven & Hartford has been scheduled for August 3 by the Connecticut Valley Chapter, **National Railway Historical Society.**

The **Mid-West Shippers Advisory Board** will hold its 79th regular meeting July 9 and 10, at the Schroeder hotel, Milwaukee, Wis.

At the annual meeting of the **Cincinnati (Ohio) Traffic Club** the following officers were elected to serve during 1947-48: President—A. W. Gill, general freight agent, Southern; 1st vice-president—P. R. Bauer, traffic manager, Philip Carey Manufacturing Company; 2nd vice-president—J. E. Fixari, manager, Transamerican Freight Line; 3rd vice-president—L. H. Sickman, traffic manager, E. Kahns' Sons Company; treasurer—E. A. Whiting, traffic manager, S. A. Gerrard Company; secretary—H. F. Oehlschlaeger, general agent, Monon.

The **Traffic Club of Pittsburgh** held its annual election June 9 at the Edgewood Country Club, Pittsburgh, Pa. Officers elected for the ensuing year were: President, A. C. Schweitzer, traffic manager, Carnegie-Illinois Steel Corporation; vice-presidents, A. S. Boden, traffic manager, Western Pennsylvania Coal Traffic Bureau; R. L. Beiswenger, general agent, Missouri-Kansas-Texas; and W. H. Beard, general agent, Southern; while W. H. Morrow, general agent, New York, Ontario & Western; and H. A. Cochran, traffic manager,

A. M. Byers Company, were elected secretary and treasurer, respectively.

The New York Division of the **Railroad Enthusiasts** will meet June 25, 7:45 p.m., in room 5928, Grand Central Terminal, New York. Henry H. McWay will discuss the Bridgeton & Harrison, which will be illustrated by a motion picture.

Equipment and Supplies

FREIGHT CARS

The BALTIMORE & OHIO has ordered 25 70-ton flat cars to be built in its own shops at Keyser, W. Va.

The CHICAGO & EASTERN ILLINOIS has ordered 200 50-ton hopper cars from the Pullman-Standard Car Manufacturing Company. This is in addition to the 300 cars reported in the *Railway Age* of February 15, page 382.

The DULUTH, MISSABE & IRON RANGE has ordered 1,500 70-ton steel hopper type ore cars, allocating 500 each to the General American Transportation Corporation, the Pressed Steel Car Company and the Pullman-Standard Car Manufacturing Company. This, in addition to 500 ordered from American Car & Foundry Co., as reported in *Railway Age* of June 14, makes a total of 2,000 such cars on order, delivery of which is expected before April 1, 1948.

The NEW JERSEY, INDIANA & ILLINOIS, a subsidiary of the Wabash, has ordered 100 50-ton automobile cars from the Pressed Steel Car Company. Construction of this equipment, inquiry for which was reported in *Railway Age* of April 19, is expected to begin in December, at the company's Mount Vernon, Ill., shops.

The UNION PACIFIC has ordered 400 70-ton all steel covered hopper cars from the General American Transportation Corporation. Inquiry for this equipment was reported in *Railway Age* of April 19, page 813.

LOCOMOTIVES

The MARITROP TRADING CORPORATION has ordered eight steam locomotives of the 2-8-2 type from the Baldwin Locomotive Works. The locomotives, which are for service in Guatemala, are scheduled for delivery late this year.

The ST. LOUIS SOUTHWESTERN has ordered five 1,000-hp. Diesel-electric switchers and one 2,000-hp. road freight Diesel from the Baldwin Locomotive Works, at an estimated cost of $600,000 to $650,000.

Construction

ATCHISON, TOPEKA & SANTA FE.—This road has begun a two-year modernization and expansion program at its Argentine yards at Kansas City, Kan., to include construction of a hump freight car classification yard and the installation of a communications network of radios, telephones, loudspeakers, repeater signals, teletype machines and pneumatic tubes. Also to be built, according to the road, are new departure yards with capacity for 15 trains, new repair facilities for bad order cars and new yard offices. Re-icing facilities will be expanded. It is estimated that the improvements will speed up operations so as to save as much as 1,000 car-days a day.

CENTRAL OF NEW JERSEY.—This road has awarded the following contracts, the estimated costs of which are shown in parentheses: To Senior & Palmer, Inc., New York, for rebuilding two bridges at Bayonne, N. J. ($260,000); and to the Ell-Dorer Constructing Company, Irvington, N. J., for the rebuilding of a bridge at Scotch Plains, N. J. ($45,000).

Supply Trade

Carl L. Peirce, Jr., president of Hubbard & Co., Pittsburgh, Pa., has been elected chairman of the board, succeeding **John W. Hubbard,** who died on June 3 at Atlantic City, N. J. **Joseph V. Smith,** executive vice-president, has been elected president, to succeed Mr. Peirce.

Harold A. Hintz has been appointed Pacific Coast sales manager for the **H. K. Porter Company,** with headquarters in Los Angeles, Cal., and **J. F. Morley** has been appointed district sales engineer, with headquarters in San Francisco, Cal.

Theodore E. Burke, formerly with the Republic Steel Corporation, has joined the **Vanadium Corporation of America** as sales engineer in the railroad division, with headquarters in Chicago.

Howard Goodwin Hill, consulting railway engineer, has announced the removal of his office to 5542 Nevada avenue, N. W., Washington 15, D. C.

Lester B. Hammersley has been appointed assistant sales manager of the **Signode Steel Strapping Company,** Chicago. Mr. Hammersley has worked in market research since joining the company in 1945.

Richard T. Spear has been appointed regional sales manager of the **All-State Welding Alloys Company,** covering eastern Pennsylvania, south New Jersey, Virginia, West Virginia, Delaware, Maryland and the District of Columbia. Mr. Spear was formerly associated with the Pan-American World Airways.

The loading division of the **Evans Products Company,** Plymouth, Mich., has announced the opening of a new Chicago office. **Kenneth J. Tobin,** in charge of the new office, will direct promotion of railroad equipment manufactured by Evans.

The **Wiley-Hughes Supply Company,** Trenton, N. J., has been appointed an authorized distributor for the **Carboloy Company,** Detroit, Mich. **C. E. Coleman,** sales manager of Wiley-Hughes, has been appointed to head the new Carboloy operation.

Rudolph Furrer has been elected vice-president in charge of engineering of the **American Car & Foundry Co.,** to succeed **Edmund Dana Campbell,** who has retired for reasons of health after 43 years' service. Earlier in his career, Mr. Furrer was associated successively with the Allis-Chalmers Manufacturing Company, the A. O. Smith Corporation and the United States Steel Corporation.

The **Air Reduction Sales Company** has announced the opening of new oxygen plants at Decatur, Ill., and Baton Rouge, La., under the supervision respectively of **George H. Klingenberg** and **J. L. West.**

Donald G. Patton has joined the **Modern Supply Company,** with headquarters in Chicago.

W. B. Blix has been appointed assistant manager of the railroad department of the **Nordberg Mnufacturing Company,** with headquarters at Milwaukee, Wis. Mr. Blix was born at Brooklyn, N. Y., on January 12, 1912, and was graduated by the University of Pennsylvania in 1934 with the bachelor's degree in civil engineering. He entered railroad service in

W. B. Blix

June, 1934, as a chainman in the construction department of the Pennsylvania at Baltimore, Md., and served as an assistant on the engineering corps at various points in Delaware and Pennsylvania from November, 1934, to January, 1937. On the latter date he was promoted to assistant supervisor of track at Wellsville, Ohio, whence he was transferred in December, 1938, to Newport, Pa., where he remained until June, 1940, when he was transferred to New York. In October, 1940, Mr. Blix was advanced to supervisor of track at Lock Haven, Pa., and in July, 1943, he was transferred to Chicago, where he remained until the time of his recent appointment as assistant manager of the railroad department of Nordberg.

Ralph V. Davies, former assistant general sales manager of the **Aluminum Company of America,** has been promoted to vice-president and general sales manager, to succeed **George J. Stanley,** who will retire July 1. Mr. Stanley, also a director

of the company and a number of its subsidiaries, will continue in this capacity. **Robert B. McKee** and **Donovan Wilmot,** also assistant general sales managers, have been promoted to vice-presidents of the firm, along with Mr. Davies.

Mr. Davies joined the company in 1919 as a metallurgist at the New Kensington, Pa., works. He later served successively in the sales offices at Rochester, N. Y., Buffalo, and Washington, D. C. He was appointed manager of the Washington office in 1928, and manager of the New York office in 1930. In 1943 he was appointed product manager for ingot sales, with headquarters in Pittsburgh, Pa., and, in 1944, assistant general sales manager in charge of the company's sales engineering and sales development activities.

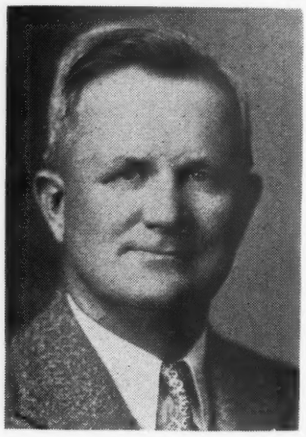
Mr. Stanley joined the Pittsburgh Reduction Company (now the Aluminum Company of America) in 1905. In 1909 he was appointed sales manager at Rochester, N. Y., and ten years later assistant general sales manager in charge of ingot sales, with headquarters in Chicago. He became vice-president of the United States Aluminum Company, in 1922, and general sales manager of the parent firm in 1928. Three years later he was appointed vice-president of the Aluminum Company and, in 1939 he was elected a director.

Harry H. Melville, whose appointment as district sales manager for the Central district of **Simmons-Boardman Publishing Corporation** was reported in the *Railway Age* of June 7, was born in Bridgeport, Conn., on September 5, 1894. He entered railroad service with the Lehigh Valley in October, 1914, and was assistant to the advertising and publicity

Harry H. Melville

agent when he left that road to join the A. E. F. during World War I. After his release from the Army in April, 1919, he was appointed advertising manager of the Air Reduction Sales Company, serving in that capacity until 1925. Mr. Melville joined Simmons-Boardman in January, 1926, as advertising space salesman in the Central territory, advancing to assistant to the vice-president, which position he held at the time of his recent appointment.

Wiliam A Roberts, vice-president in charge of the tractor division of the **Allis-Chamers Manufacturing Company,** has been appointed executive vice-president of the same division. **William C. Johnson,** vice-president in charge of the general machinery division, has been appointed executive vice-president of the same division. **Marshal L. Noel,** general sales manager of the tractor division, has been appointed vice-president and general sales manager



William A. Roberts

of the same division. **J. L. Singleton,** manager of the general machinery division's district sales offices, has been appointed vice-president and director of sales of the same division.

Mr. Roberts joined the Allis-Chalmers tractor organization in 1924 as a salesman, with headquarters at Wichita, Kan. In 1926 he became Canadian sales representative, and two years later he resigned to enter a partnership in a farm equipment dealer-distributorship, with headquarters at Regina, Sask. He returned to Allis-Chalmers in 1930 as agricultural sales manager of the tractor division, and in 1931 became general sales manager of the division. In 1941 Mr. Roberts was appointed manager of the tractor division, and in March, 1944, he was advanced to vice-president in charge of that division, the position he held at the time of his recent appointment.

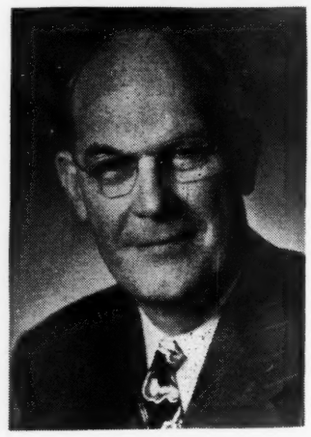
Mr. Johnson entered the service of Allis-

William C. Johnson

Chalmers in 1924. In 1929, following various field and erection assignments, he was named representative of the crushing and cement department in the district office at Atlanta, Ga. Six years later he became the company's general machinery sales representative at Chattanooga, Tenn. In 1937 he was appointed to open the Allis-Chalmers district office at Knoxville, Tenn., and in 1940 he was named sales manager of the crushing and cement department. Two years later he was placed in charge of sales for the general machinery division, succeeding Mr. Geist, who became president of Allis-Chalmers. In March, 1944, Mr. Johnson was advanced to vice-president in charge of the general machinery division, the position he held at the time of his recent appointment.

Marshal L. Noel

Mr. Noel joined Allis-Chalmers in 1928, following his graduation by the Texas Agricultural & Mechanical College, and in 1929 he became service manager for one of the company's tractor lines. In 1930 he served as assistant sales manager for industrial wheel tractors, and then spent a



J. L. Singleton

year at Dallas, Tex., as a salesman. Mr. Noel was appointed industrial district manager at Rockford, Ill., in 1932, and two years later he was promoted to assistant manager of industrial sales. In 1938 he was appointed manager of industrial sales, and in 1945 he was advanced to general sales manager of the tractor division.

Mr. Singleton, a graduate of the Alabama Polytechnic Institute, joined Allis-Chalmers in 1926, and served in various departments before going to the Denver (Colo.) district office, where he remained for twelve years, the last four as manager. In 1942 Mr. Singleton returned to the

West Allis works as assistant manager of the steam turbine department. In 1945, after serving for a short period as assistant manager, he was advanced to manager of the district sales offices of the general machinery division, the position he held at the time of his recent appointment.

OBITUARY

Charles K. Mentz, chief inspector for the Sperry Rail Service, Hoboken, N. J., died suddenly of a heart attack on June 13.

August H. Tuechter, president of the Cincinnati Bickford Tool Company since 1909, died on May 17.

John W. Hubbard, chairman of the board of Hubbard & Co., Pittsburgh, Pa., died on June 3, in the Atlantic City Hospital, Atlantic City, N. J., at the age of 82. Mr. Hubbard was born at Pittsburgh, on December 18, 1864, and was graduated by the Pennsylvania Military College in 1887. He immediately went to work in the company being operated by his father, a company organized in 1843. Upon the death of his father in 1897, Mr. Hubbard purchased the shovel division of the business, which, under his direction, developed into the present company. In 1900 the company

John W. Hubbard

added to its activities the manufacture of pole line hardware, in addition to which it now fabricates railroad track tools, rail anchors and alloy spring washers. Besides his industrial interests and activities, Mr. Hubbard took an active part in the development of river navigation and organized the Mississippi Navigation Company and the Campbell Transportation Company. He was, in addition, a director of the following companies: City Ice & Fuel Co., Chicago; New York Air Brake Company, Watertown, N. Y.; Continental Foundry & Machine Co., East Chicago, Ind.; Beall Bros. Supply Company, Alton, Ill.; Ames-Baldwin-Wyoming Company, Parkersburg, W. Va.; Sands Level & Tool Co., Detroit, Mich.; Baltimore & Ohio Terminal Railroad, Chicago; Empire Trust Company, New York; and the Pittsburgh Brewing Company, Pittsburgh.

Philip H. Simpson, manager of railway sales, eastern district, of the K. W. Battery Company, died May 29, after a period of ill health. Born in Brooklyn, N. Y., in 1886, Mr. Simpson spent his entire business career in the railroad field. He first worked in the New York office of the Gould Storage Battery Company, beginning in 1907, and continuing with the Gould company until it was sold. He later served for about one year with the Edison Storage Battery Company, and in May, 1930, joined the K. W. Battery Company, as manager of railway sales, continuing in that capacity until his death.

Financial

BALTIMORE & OHIO.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $6,110,000 of Series U equipment trust certificates, the proceeds of which will be applied toward the purchase of 8 sleeping cars and 2,000 hopper-cars, as outlined in *Railway Age* of May 31, page 1145. The certificates will mature in 10 equal annual installments starting June 1, 1948. The report also approves a selling price of 99.309 with a 2 per cent interest rate, the bid of Halsey, Stuart & Co., on which basis the average annual cost will be approximately 2.14 per cent.

CENTRAL OF NEW JERSEY-CENTRAL OF PENNSYLVANIA. — *Equipment Trust Certificates.*—These roads have sold, subject to approval by the Interstate Commerce Commission, $1,605,000 of Series A equipment trust certificates to Harris, Hall & Co. on a bid of 99.011 for a 2⅜ per cent annual interest rate. (See *Railway Age* of June 7, page 1189.)

CHICAGO & NORTH WESTERN.—*Equipment Trust Certificates.*—This company has applied to the Interstate Commerce Commission for authority to assume liability for $4,650,000 of equipment trust certificates, the proceeds of which will be applied toward the acquisition of the following equipment: 1,000 box cars, at $3970 each, from the American Car & Foundry Co.; 4 1,000-hp. Diesel-electric switching locomotives, at $89,650 each, and 1 1,000-hp. Diesel-electric switching locomotive suitable for road service, at $90,300, from Fairbanks, Morse & Co.; 1 1,000-hp. Diesel-electric switching locomotive, at $89,750, and 6 600-hp. Diesel-electric switching locomotives, at $70,000 each, from the American Locomotive Company; 3 1,500-hp. Diesel-electric road switching locomotives, at $153,200 each, from the Baldwin Locomotive Works; and 4 1,500-hp. Diesel-electric "A" freight locomotives, at $156,850 each, 1 1,500-hp. Diesel-electric "B" freight locomotive, at $137,125, and 1 1,500-hp. Diesel-electric "B" freight locomotive, at $130,225, from the Electro-Motive Division of General Motors Corporation. The certificates would be dated August 1 and sold on the basis of competitive bidding.

DELAWARE, LACKAWANNA & WESTERN. —*Merger of Leased Lines.*—Division 4 of the Interstate Commerce Commission has authorized the merger of the properties of the Passaic & Delaware Extension and the Morris & Essex Extension into the D. & L. W. for continued operation. The transactions, part of a program instituted by the D. L. & W. several years ago to acquire leased lines which form a principal part of its system, were approved subject to the usual employee-protection conditions. All outstanding shares of capital stock of the P. & D. E., which extends 7.5 miles from Bernardsville, N. J., to Gladstone, are owned by the Lackawanna. The M. & E. E. extends 2 miles from Paterson Junction, N. J., to Paterson, and also has 7.9 miles of yard and switching tracks. The D. L. & W. will pay $75 per share for the approximately 250 shares of outstanding M. & E. E. capital stock in the hands of the public.

FLORIDA EAST COAST.—*Annual Report.*—Operating revenues of this road last year amounted to $26,543,488, compared with $29,571,006 in 1945. Operating expenses were $20,721,821, compared with $20,574,937. Net income was $109,494, compared with a deficit of $76,325. Current assets at the end of the year were $27,459,885, compared with $40,953,612. Current liabilities were $2,416,844, compared with $14,600,630. Long term debt was $57,918,177, compared with $61,515,865.

GEORGIA, FLORIDA & ALABAMA.—*Reorganization.* — This road's reorganization proceedings has been assigned by the Interstate Commerce Commission for further hearing before Examiner C. A. Bernhard at Washington, D. C., on July 15. The hearing will be for the purpose of receiving further evidence with respect to plans of reorganization heretofore filed or which may be filed before or during the hearing. Evidence will also be received "with respect to a fair and equitable formula or basis of operations and accounting between the Seaboard Air Line and the debtor's trustee for the operation of the debtor's property from August 1, 1946, to the consummation of the reorganization of the debtor, as provided in the court's order of May 20, 1946."

MERIDIAN & BIGBEE RIVER.—*Plan of Reorganization.*—Division 4 of the Interstate Commerce Commission has set July 15 as a hearing date on a plan of reorganization for this road under section 77 of the Bankruptcy Act. The plan was filed last month by J. C. Floyd, trustee of the debtor. The hearing will be held at the commission's Washington, D. C., offices before Examiner H. H. Wilkinson, who also has been authorized to hear presentations with respect to any other reorganization plans that may be filed before or during the hearing.

PULLMAN COMPANY.—*Sale to Railroad Buying Group.*—A proposed agreement to consummate sale of the entire capital stock of the Pullman Company to the buying group of 56 railroads was filed in the federal district court at Philadelphia, Pa., last week by Pullman Incorporated, the seller, and the purchasing railroads. This action followed the approval last month by the Interstate Commerce Commission of the pooling plan involved in the purchase of the company (see *Railway Age* of May 24, page 1093).

The purchase price for the 731,350

shares in the sleeping car company is fixed at $40,202,482, plus a further liquidation dividend and other payments to or for Pullman Incorporated, amounting to $5.7 million, to be made by the Pullman Company before the stock delivery date. The price is based on agreed values as of December 31, 1945, of the Pullman properties to remain in the company under the new stock ownership. These properties include six repair shops and ten laundries throughout the country, a large inventory of materials and supplies, and more than 6,000 sleeping and composite cars.

The closing agreement sets out in detail for the court's approval, the necessary provisions to effectuate the stock sale authorized by the district court in January, 1946. The papers filed include a proposed escrow agreement between Pullman Incorporated and the Pullman Company designed to carry out an agreement by the former to protect the latter under its new ownership against liabilities and claims which might become payable in the future by the Pullman Company on business transactions occurring prior to December 31, 1945. It provides a means of adjustment, with final return to Pullman Incorporated of any amount not needed for the purposes of the escrow. The agreement recites that Pullman Incorporated will make a capital contribution to the Pullman Company of $11.7 million which, with $3.3 million from the escrow fund, will enable the Pullman Company to deposit with collectors of internal revenue a total of $15 million to apply against possible tax deficiencies and interest thereon, in the returns of the eight years prior to December 31, 1945, which are still being audited by the Bureau of Internal Revenue. It is expected that a delivery date will be fixed by the court when it approves the contract.

PENNSYLVANIA.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $11,025,000 of Series S equipment trust certificates. The certificates would be dated July 1, sold on the basis of competitive bidding and applied toward the purchase price of 1,000 box cars, at an estimated unit cost of $4,580, to be built in the applicant's own shops, and the following additional equipment:

	Description and Builder	Estimated Unit Price
3	6,000-hp. Diesel-electric freight locomotives (Electro-Motive Division, General Motors Corporation)	$600,000
8	6,000-hp. Diesel-electric passenger locomotives (Electro-Motive)	603,500
5	6,000-hp. Diesel-electric passenger locomotives (Electro-Motive)	640,600
8	6,000-hp. Diesel-electric freight locomotives (Fairbanks, Morse & Co.)	610,000
9	6,000-hp. Diesel-electric passenger locomotives (Baldwin Locomotive Works)	622,000
5	6,000-hp. Diesel-electric passenger locomotives (American Locomotive Company)	622,000
4	sleeping cars; 10 single and 6 double bedrooms (American Car & Foundry Co.)	120,000
2	sleeping cars, 2 drawing rooms and 14 single bedrooms (A.C.F.)	130,000
3	special lounge cars (A.C.F.)	145,000
10	sleeping cars, 10 single and 6 double bedrooms (Pullman-Standard Car Manufacturing Company)	120,000
6	sleeping cars, 10 single and 6 double bedrooms (Pullman-Standard)	121,300
2	sleeping cars, 21 single bedrooms (Pullman-Standard)	130,100
2	all-steel coaches (Pullman-Standard)	96,000
33	sleeping cars, 10 single and 6 double bedrooms (Pullman-Standard)	105,000
24	sleeping cars, 12 duplex rooms and 4 double bedrooms (Pullman-Standard)	120,000
11	sleeping cars, 6 double bedrooms and lounge-buffet (Pullman-Standard)	105,000
8	sleeping cars, 1 drawing room, 3 double bedrooms and bar and lounge (Pullman-Standard)	108,000
2	sleeping cars, 2 master rooms, 1 double bedroom and buffet, lounge and observation facilities (Pullman-Standard)	125,000
7	sleeping cars, 2 drawing rooms, 1 compartment, 1 double bedroom and buffet, lounge and observation facilities (Pullman-Standard)	109,000
2	sleeping cars, 3 double bedrooms, barber shop, secretary's room and lounge and buffet facilities (Pullman-Standard)	105,000

TOLEDO, PEORIA & WESTERN.—*New Directors.*—This road on June 12 announced the election of two new directors: Henry E. Perry, former executive vice-president of the Commercial Solvents Corporation; and Arthur D. Welton, Jr., of the legal firm of Winston, Strawn & Shaw, Chicago and a director of the T. P. & W. from 1926 to 1942.

Average Prices Stocks and Bonds

	June 17	Last week	Last year
Average price of 20 representative railway stocks	44.83	42.94	66.73
Average price of 20 representative railway bonds	87.04	86.22	100.45

Dividends Declared

Alleghany & Western.—guaranteed, $3.00, semi-annually, payable July 1 to holders of record June 20.

Camden & Burlington.—75¢, semi-annually, payable July 1 to holders of record June 14.

Canada Southern.—$1.50, semi-annually, payable August 1 to holders of record June 23.

Canadian Pacific. — 4% non-cumulative pref., 2%, semi-annually, payable August 1 to holders of record July 1.

Cincinnati, New Orleans & Texas Pacific.—common, $3.00, payable June 24 to holders of record June 9.

Clearfield & Mahoning. — $1.50, semi-annually, payable July 1 to holders of record June 20.

Delaware.—$1.00, semi-annually, payable July 1 to holders of record June 14.

East Pennsylvania.—$1.50, semi-annually, payable July 15 to holders of record July 1.

Elmira & Williamsport.—7% pfd., $1.60, semi-annually, payable July 1 to holders of record June 20.

Georgia.—$1.75, quarterly, payable July 15 to holders of record July 1.

Lykens Valley. — 40¢, semi-annually, payable July 1 to holders of record June 14.

Mahoning Coal. — common, $7.50; 5% pref., $1.25, semi-annually, both payable July 1 to holders of record June 23.

Massawippi Valley.—$3.00, semi-annually, payable August 1 to holders of record July 1.

Nashville & Decatur. — 7½% guart'd., 93¾¢, semi-annually, payable July 1 to holders of record June 20.

New London Northern.—$1.75, quarterly; extra, 25¢, both payable July 1 to holders of record June 14.

Northern Central. — $2.00, semi-annually, payable July 15 to holders of record June 30.

Norwich & Worcester.—8% pfd. $2.00, quarterly, payable July 1 to holders of record June 16.

Philadelphia & Trenton.—$2.50, quarterly, payable July 10 to holders of record July 1.

Pittsfield & North Adams.—$2.50, semi-annually, payable July 1 to holders of record June 20.

Rochester & Genesee Valley.—$2.00, semi-annually, payable July 1 to holders of record June 20.

Savannah & Atlanta.—5% pfd., $1.25, quarterly, payable July 1 to holders of record June 11.

Stony Brook. — $2.50, semi-annually, payable July 6 to holders of record June 28.

Tennessee, Alabama & Georgia.—resumed, 25¢, payable June 16 to holders of record June 5.

Tunnel Co. of St. Louis.—$3.00, semi-annually, payable July 1 to holders of record June 14.

United New Jersey & Canal.—$2.50, quarterly, payable July 10 to holders of record June 20.

West Jersey & Seashore.—6% special guart'd., $1.50, semi-annually, payable June 2 to holders of record May 15.

Western New York & Pennsylvania.—common, $1.50; semi-annually; 5% pfd., $1.25, semi-annually, both payable July 1 to holders of record June 30.

Railway Officers

EXECUTIVE

James C. Wroton, whose appointment as vice-president—operations of the Norfolk Southern at Norfolk, Va., was reported in the *Railway Age* of May 31, was born at Denmark, S. C. Mr. Wroton entered railroad service in November, 1901, as telegraph operator with the Seaboard Air Line and served until 1911 as telegraph operator, agent and dispatcher, successively, with that road, the Atlantic & Birmingham (now part of the Atlantic Coast Line), the A. C. L., the Southern, Missouri Pacific and Southern Pacific. In 1911 he became chief dispatcher for the Seaboard Air Line at Hamlet, N. C.,

James C. Wroton

being appointed assistant to superintendent transportation at Norfolk, Va., in 1915. Mr. Wroton was promoted to assistant superintendent transportation in 1918 and in 1922 he became transportation assistant on the staff of the operating vice-president at Norfolk and Savanah, Ga. From 1928 to June 11, 1942, he served as general superintendent transportation at Savannah and Norfolk, successively, and on the latter date he became general manager. In August, 1946, Mr. Wroton became general superintendent transportation of the S. A. L., which position he was holding at the time of his appointment as vice-president—operations of the Norfolk Southern, with jurisdiction over transportation, engineering, maintenance and personnel, effective June 1.

Lewis Pilcher, whose appointment as executive vice-chairman of the Freight Claim division of the Association of American Railroads, with headquarters at Chicago, was reported in the *Railway Age* of June 7, was born at Richmond, Va., and entered railroad service in March, 1900, with Chesapeake & Ohio. In September of the same year he joined the staff of a newspaper—the Richmond News-Leader. Two years later he joined the traffic department of the Richmond, Fredericksburg & Potomac, handling freight, passenger, baggage and freight claim work.

At the same time he assisted with the work of the former Freight Claim Association (predecessor of the Freight Claim division of the A. A. R.), the part-time secretary of which was Col. W. P. Taylor, traffic manager of the R. F. & P. Upon the death of Colonel Taylor in April, 1918,

Lewis Pilcher

Mr. Pilcher was appointed secretary and treasurer of the Freight Claim Association, and served in that capacity until July, 1919, when he became secretary of the newly formed Freight Claim division, with headquarters at Richmond until January, 1920, and afterwards at Chicago. He served as secretary of the division and its various committees, particularly its National Freight Loss and Damage Prevention committee, until May 16, when he was promoted to executive vice-chairman of the Freight Claim division.

T. H. Banister, whose appointment as assistant vice-president in traffic of the St. Louis-San Francisco, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of May 31, was born at Springfield, Mo., on October 1, 1896, and entered the service of the Frisco in 1924 as a soliciting freight and passenger agent, at Wichita, Kan. From September 1, 1927, to May 1, 1928, he served as a soliciting freight agent at Memphis, Tenn., and later during

T. H. Banister

1928 as commercial agent. On October 1, 1928, Mr. Banister was appointed general agent at Memphis, and served in that capacity until April 15, 1931, when he was promoted to traffic manager at Birmingham, Ala. On January 1, 1942, he was advanced to freight traffic manager, with headquarters at St. Louis, the position he held at the time of his recent appointment.

Karl Fischer, whose election as vice-president of the Chicago, Burlington & Quincy, with headquarters at Chicago, was reported in the *Railway Age* of May 31, was born at Quincy, Ill., on June 18, 1883, and entered the service of the C. B. & Q. on June 1, 1909, as a timekeeper and served in various minor capacities until October, 1918, when he was appointed assistant trainmaster at Billings, Mont., whence he was transferred in June, 1919, to Casper, Wyo. In October, 1919, he was promoted to train-

Karl Fischer

master at Lincoln, Neb., and two years later he became transportation inspector on the staff of the superintendent of transportation, at Chicago. On May 16, 1924, Mr. Fischer was named inspector of transportation on the general manager's staff, at Omaha, Neb., and on July 16, 1925, he was appointed assistant superintendent at Daytons Bluff, Minn. He was promoted to superintendent on May 16, 1929, with headquarters at Creston, Iowa, and served in that capacity until December 1, 1931, when he returned to Omaha as assistant superintendent. After serving almost a year as superintendent of the relief and employment department, and chairman of the pension board, at Chicago, he was appointed land and tax commissioner, Burlington Lines, on May 16, 1935. In June, 1940, he was granted a leave of absence for special government service at Washington, D. C., and returned to Chicago on January 1, 1942, as assistant to the president, Burlington Lines, the position he held at the time of his election to the vice-presidency.

FINANCIAL, LEGAL AND ACCOUNTING

Thomas Hunter has been appointed secretary of the Toledo, Peoria & Western, at Peoria, Ill. He is a member of the Peoria law firm of Hunter, Kavanaugh, McLaughlin & Bond.

J. T. Gallaspy, a special representative of the Association of American Railroads since 1938, has been appointed general freight claim agent of the St. Louis Southwestern, with headquarters at Tyler, Tex., succeeding **J. A. Parker,** who has retired after 54 years of service.

Alfred P. Kivlin has been appointed superintendent, freight claim prevention, of the New York, New Haven & Hartford, succeeding **W. C. McAlister,** who has retired. Mr. Kivlin joined the New Haven in 1944, when that road established a precedent by employing a container engineer. Prior to going with the New Haven Mr. Kivlin had for 21 years been associated with the freight container bureau of the Association of American Railroads, first as research engineer on packing, container design and carloading practices, and then as assistant chief engineer.

William Brain, whose appointment as general auditor of Missouri-Kansas-Texas, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of June 14, was born at Atoka, Okla., on April 5, 1895, and entered the service of the Katy in September, 1911. He served in various minor capacities until February, 1919, when he was appointed shop accountant, in which capacity he served at Sedalia, Mo., and

William Brain

Parsons, Kan. In August, 1926, Mr. Brain was promoted to disbursements accountant and assistant to the auditor, at Dallas, Tex., and in February, 1939, he was named assistant auditor and paymaster, at Parsons. In August, 1942, he was advanced to auditor, with headquarters at St. Louis, the position he held at the time of his recent promotion.

M. A. Niegro, whose appointment as real estate agent of the Seaboard Air Line at Norfolk, Va., was reported in the *Railway Age* of June 7, was born at Norfolk and began his service with the Seaboard Air Line in 1917 in the engineering department. Progressing steadily through positions of increasing importance, he has had long experience in real estate matters. Mr. Niegro was appointed chief land appraiser for the system on May 1, 1946, and held that position at the time of his recent appointment as real estate agent.

OPERATING

F. H. Ryan, train dispatcher of the Chicago, Milwaukee, St. Paul & Pacific at La Crosse, Wis., has been appointed

trainmaster, with headquarters at Green Bay, Wis., succeeding **L. W. Palmquist,** whose appointment as assistant superintendent, with headquarters at Beloit, Wis., was reported in the *Railway Age* of June 14.

E. O. Walker, whose appointment as superintendent of transportation of the Fort Worth & Denver City and the Wichita Valley (both parts of the Burlington system), with headquarters at Fort Worth, Tex., was reported in the *Railway Age* of June 7, was born at Denison, Tex., on June 22, 1887, entered railroad service in 1906 with the F. W. & D. C., and has served continuously with that road. During World War I, Mr. Walker served the United States Railroad Administration as car accountant for several railroads in the southwestern states. During World War II, he was granted a leave of absence to serve until the close of the war as district rail director, railway transport, in the Office of Defense Transportation in the Southwestern region, at Dallas, Tex. On November 1, 1945, he returned to his position as car accountant at Fort Worth, the position he held at the time of his recent promotion. Mr. Walker is one of the founders of the Southwestern Car Service Association, in which he has held various official positions, and of which he is now secretary-treasurer.

TRAFFIC

N. S. Stark, Jr., has been appointed general agent of the Chesapeake & Ohio and Pere Marquette at Charleston, W. Va. **W. J. Harahan, Jr.,** has been appointed general agent at Richmond, Va.

John L. Bickley, whose appointment as general passenger agent of the Grand Trunk Western, with headquarters at Chicago, was reported in the *Railway Age* of May 24, entered railroad service nearly thirty years ago as a stenographer with the New York Central, at Cincinnati, Ohio. In 1921 he entered the service of the Grand Trunk, when that road opened its passenger office at Cincinnati. After a brief period of service with the Chicago, Rock Island & Pacific and attendance at Ohio State University, he returned to the Grand Trunk as traveling passenger agent at Cincinnati, whence he was transferred to Detroit, Mich., in 1929. He returned to Cincinnati in 1931 to head the passenger department there, and in 1940 he was advanced to assistant to the passenger traffic manager, at Chicago, the position he held at the time of his recent promotion.

John L. Bickley

Virgil L. Estes, general passenger agent of the Southern at Jacksonville, Fla., has been promoted to assistant passenger traffic manager, with the same headquarters. Mr. Estes was born at Atlanta, Ga., on September 23, 1883, and attended the public schools of Orlando, Fla. He entered the service of the Southern on September 1, 1903, in the passenger traffic department at Jacksonville where he served as stenographer and ticket clerk, later transferring to Charleston, S. C., and Atlanta, Ga., successively. After serving in various clerical capacities, he was appointed district passenger agent at Atlanta and in 1924 he returned to Jacksonville as division passenger agent. Mr. Estes became general passenger agent in April, 1931, which position he held until his recent promotion.

Virgil L. Estes

L. W. Glover, whose appointment as assistant freight traffic manager of the Colorado & Southern (part of the Burlington system), with headquarters at Denver, Colo., was reported in the *Railway Age* of June 7, was born at Denver on January 3, 1909, entered the service of the C. & S. on February 15, 1926, as a messenger, and served in various minor capacities until February 1, 1934, when he was promoted to freight rate clerk, traffic department. On October 14, 1935, he became a division clerk in the same department, and on April 1, 1942, he was appointed assistant general freight agent, divisions. On January 1, 1944, Mr. Glover was named assistant general freight agent, rates, the position he held at the time of his recent promotion.

L. W. Glover

W. J. Kutilek has been appointed general agent of the Toledo, Peoria & Western, at Omaha, Neb. **B. C. Simpson** has been appointed general agent at San Francisco, Cal.

W. M. Dodds, traveling freight and passenger agent of the Denver & Rio Grande Western, at Portland, Ore., has been appointed general agent, with headquarters at Minneapolis, Minn., succeeding **W. D. Fernald,** whose transfer to Kansas City, Mo., was reported in the *Railway Age* of May 31.

Ernest W. Ledin has been appointed supervisor of merchandise traffic of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Minneapolis, Minn.

H. J. Spindler, commercial agent of the Erie, at Rochester, N. Y., has been appointed general agent, with headquarters at Peoria, Ill., succeeding **C. C. Mitchell,** furloughed.

ENGINEERING & SIGNALING

The title of **C. C. Haire,** engineer of statistics of the Illinois Central, at Chicago, has been changed to valuation engineer.

B. J. Ornburn, whose appointment as engineer and superintendent of bridges and buildings, system, of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, was reported in the *Railway Age* of June 7, was born at Granville, Mo., on July 21, 1900, and received his higher technical training at the University of Missouri. Mr. Ornburn entered railroad service in June, 1922, as a rodman of the Wabash at Moberly, Mo., and in April, 1923, he became a detailer and checker of designs and plans for the Missouri State Highway Commission, at Jefferson City, Mo. He entered the service of the Marland Refining Company in March, 1926, as a

B. J. Ornburn

TRANSPORTATION LIBRARY

structural engineer, at Ponca City, Okla., and served in that capacity until June, 1927, when he was appointed structural engineer in charge of the drafting room of Harrington-Howard & Ash, consulting engineers, at Kansas City, Mo. In November, 1929, he joined the Montana State Highway Department as design engineer, and became bridge engineer in May, 1931. Four years later he was named bridge design engineer. In April, 1942, he was appointed assistant engineer of the Northern Pacific, at Seattle, Wash., and was advanced to assistant bridge engineer one year later. In August, 1946, he entered the service of the Milwaukee as assistant bridge engineer, and served in that capacity until the time of his recent promotion.

A. B. Chapman, whose appointment as assistant chief engineer, Lines East, of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, was reported in the *Railway Age* of June 7, was born at Elmwood, Neb., on February 24, 1890, and received his higher education at the University of Washington. He entered railroad service in May, 1919, as a structural draftsman on the Chicago, Milwaukee, St. Paul & Pacific, at Seattle, Wash. From April, 1922, to June, 1929, he served as office engineer at Seattle, and from the latter date until December, 1930, he served as principal assistant engineer on the Seattle Grade Separation Committee. In January, 1931, he was appointed assistant engineer on the Milwaukee, and served in that capacity until April, 1933, when he became a structural draftsman at Chicago, where he was appointed chief draftsman in July, 1938. Mr. Chapman became office engineer at Chicago, in November, 1938. In June, 1942, he was appointed bridge engineer, with headquarters as before at Chicago, and in July, 1946, he was advanced to engineer and superintendent of bridges and buildings, the position he held at the time of his recent promotion.

A. B. Chapman

The Gulf, Mobile & Ohio has announced the following appointments of Alton officers in connection with the consolidation of the G. M. & O. and the Alton: **M. D. Carothers,** chief engineer, at Chicago, has been appointed assistant chief engineer, system, with headquarters at Bloomington, Ill. **H. Bober,** bridge and building engineer, at Chicago, becomes bridge and building engineer, system, with headquarters at Mobile, Ala. **J. R. Hoagland,** valuation and office engineer, at Chicago, becomes assistant engineer, system, with headquarters at Mobile. **J. A. Erskine,** assistant bridge and building engineer, at Chicago, becomes assistant bridge and building engineer, eastern and western divisions, with the same headquarters. **M. R. Hoagland,** office engineer, at Chicago, becomes office engineer, eastern and western divisions, at Bloomington. **A. F. Kadow,** assistant engineer, at Chicago, becomes assistant engineer, eastern and western divisions, at Bloomington. **J. J. Ochs,** assistant engineer, at Chicago, becomes assistant engineer, eastern and western divisions, at Bloomington. **E. M. Unzicker,** division engineer, becomes division engineer, eastern division, with headquarters as before at Bloomington. **W. H. Stumm,** assistant division engineer, at Bloomington, becomes assistant division engineer, eastern division, with the same headquarters. **E. G. Wall,** division engineer, at Bloomington, becomes division engineer, western division, with the same headquarters. **R. D. Helwig,** assistant division engineer, at Bloomington, becomes assistant division engineer, western division, with the same headquarters.

H. B. Christianson, whose appointment as principal assistant engineer, system, of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, was reported in the *Railway Age* of June 7, was born at Minneapolis, Minn., on September 24, 1892, and was graduated in civil engineering by the University of Minnesota in 1915. He entered the service of the Milwaukee on March 1, 1917, as a field draftsman in the valuation department. Released from the armed forces he returned to the Milwaukee in January, 1919, and served as instrumentman and assistant engineer until March, 1925, when he was appointed division engineer, in which capacity he served at various points in Iowa, Montana, Wisconsin, and Illinois. In October, 1942, Mr. Christianson entered the armed forces, to serve almost three years overseas. He returned to the Milwaukee in January, 1946, as assistant to chief engineer, the position he held at the time of his recent appointment.

H. B. Christianson

J. K. Waitt, whose appointment as valuation engineer of the Seaboard Air Line at Norfolk, Va., was reported in the *Railway Age* of June 7, was born at Raleigh, N. C. on March 19, 1885. Mr. Waitt received a degree in civil engineering from North Carolina State College in 1904 and entered the service of the Seaboard Air Line in that year. He has been with that system since that time, except for the period 1908 to 1913, when he was active in the development of Florida phosphate rock deposits. Serving in varied engineering capacities after his return to the road, he was appointed real estate agent in 1925 and was closely identified with the line's expansion and construction activities in the following years. Mr. Waitt was real estate agent at the time of his recent promotion to valuation engineer, in which capacity he will have jurisdiction over valuation matters and real estate transactions.

MECHANICAL

Arthur E. Rice, assistant chief mechanical officer of the Denver & Rio Grande Western, at Denver, Colo., has been appointed chief mechanical officer, with the same headquarters, succeeding **W. H. Sagstetter.**

C. D. Allen, master mechanic of the Chesapeake & Ohio at Huntington, W. Va., has been appointed shop superintendent at Huntington, succeeding **F. B. Downey,** deceased. **J. C. Smith,** general foreman at Peru, Ind., has been appointed master mechanic there, succeeding **D. H. Richmond,** who has been transferred to Huntington, to succeed Mr. Allen.

M. B. O'Meara, master mechanic of the Delaware, Lackawanna & Western at East Buffalo, N. Y., has been transferred to Scranton, Pa. **J. Purcell,** general master mechanic at Scranton has been appointed master mechanic at Hoboken, N. J. **C. S. Williams,** general foreman, motive power department (Diesel shop), has been appointed supervisor Diesel locomotives. **G. F. Bachman,** supervisor Diesel locomotives, Scranton, has been appointed master mechanic at East Buffalo. **T. E. Dunn,** master mechanic at Scranton, has been appointed general master mechanic at Scranton.

OBITUARY

James T. Carbine, general traffic manager—coal of the Pennsylvania, with headquarters at Philadelphia, Pa., died in that city on June 13, in his 57th year. Mr. Carbine was born at Fernwood, Pa., and entered the service of the Pennsylvania in the secretary's office at Philadelphia in 1906. Three years later he was transferred to the coal traffic department and after various promotions became coal freight agent at Philadelphia in 1922. He became coal traffic manager at Pittsburgh, Pa., in 1926 and the following year returned to Philadelphia as assistant general traffic manager. He became coal traffic manager at Philadelphia in 1932 and general traffic manager—coal in 1943.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1947

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax-accruals	Net railway operating income 1947	Net railway operating income 1946
Akron, Canton & Youngstown	April	171	$402,306	$46	$426,762	$66,062	$41,912	$24,195	$125,001	$278,531	65.3	$148,231	$59,228	$75,839	$23,793
	4 mos.	171	1,678,992	282	1,757,122	272,013	161,734	94,291	518,931	1,128,847	64.2	628,275	249,202	315,469	101,546
Alton	April	959	1,895,689	367,794	2,617,829	409,566	418,824	78,778	942,093	1,994,997	76.2	622,831	190,226	233,463	—378,138
	4 mos.	959	7,104,653	1,538,876	10,029,036	1,603,177	1,550,890	312,582	3,831,318	7,887,571	78.6	2,141,464	771,821	613,796	—768,323
Atchison, Topeka & Santa Fe System	April	13,107	28,063,779	3,583,666	34,879,156	5,519,524	6,887,189	801,733	12,140,567	26,900,638	77.1	7,978,518	4,565,597	3,842,162	3,083,806
	4 mos.	13,107	108,926,276	14,722,087	135,931,082	19,918,261	25,991,435	3,110,180	47,425,625	102,523,754	75.4	33,407,328	19,205,082	15,406,639	16,161,924
Atlanta & St. Andrews Bay	April	82	152,787	892	158,705	18,885	15,214	6,131	41,400	91,241	57.5	67,464	30,469	29,164	12,734
	4 mos.	82	630,131	4,145	654,750	77,554	62,772	25,400	172,903	376,918	57.6	277,832	122,348	115,302	33,825
Atlanta & West Point	April	83	239,076	39,427	318,550	57,207	50,646	12,529	168,790	309,028	97.0	9,522	21,368	—32,406	—173
	4 mos.	93	963,706	177,138	1,302,668	207,166	193,848	52,067	667,316	1,205,359	92.5	97,309	82,898	—68,118	21,597
Western of Alabama	April	133	239,346	39,940	313,760	38,177	58,056	12,161	140,439	267,042	85.1	46,718	32,591	15,000	32,254
	4 mos.	133	965,012	204,773	1,302,112	161,240	232,018	49,992	576,045	1,092,805	83.9	209,307	137,557	68,590	105,404
Atlantic Coast Line	April	5,573	8,479,947	1,735,991	11,252,911	2,443,226	1,853,072	252,534	4,710,652	9,761,104	86.7	1,491,807	1,000,000	226,637	245,024
	4 mos.	5,573	34,400,698	8,602,653	46,839,041	9,064,288	7,520,733	1,059,276	18,734,215	38,483,472	82.2	8,355,569	4,100,000	2,952,969	606,736
Charleston & Western Carolina	April	343	356,544	1,885	369,841	65,887	69,722	12,836	145,829	303,513	82.1	66,328	30,000	24,127	—18,771
	4 mos.	343	1,500,589	12,501	1,553,369	271,998	268,073	51,370	585,139	1,210,809	77.9	342,560	125,000	189,737	—93,720
Baltimore & Ohio	April	6,193	25,728,447	1,705,557	29,213,979	3,571,284	6,492,036	737,616	12,218,435	24,272,266	83.1	4,941,713	2,226,945	2,299,274	—3,669,913
	4 mos.	6,193	98,971,002	7,394,950	112,919,583	13,117,863	24,508,686	2,620,680	48,445,591	93,583,956	82.9	19,335,627	8,352,963	9,855,607	—5,227,572
Staten Island Rapid Transit	April	29	155,237	99,258	265,485	42,984	36,856	2,173	146,737	253,193	95.4	12,292	41,355	—46,148	—45,679
	4 mos.	29	624,769	402,197	1,068,658	180,708	144,449	6,820	597,732	1,024,035	95.8	44,623	164,031	—189,269	—192,252
Bangor & Aroostook	April	602	1,479,075	45,052	1,560,524	208,223	190,986	6,811	435,063	883,237	56.6	677,287	264,193	351,979	151,517
	4 mos.	602	5,308,373	193,790	5,628,906	875,183	739,610	29,430	1,651,322	3,456,069	61.4	2,172,837	888,683	1,161,079	781,128
Bessemer & Lake Erie	April	214	1,486,328	1,480	1,503,661	140,095	440,298	16,205	353,173	994,388	66.1	509,273	293,239	443,747	—463,989
	4 mos.	214	4,448,452	6,320	4,512,730	449,801	1,706,908	66,285	1,343,340	3,751,299	83.1	761,431	859,284	1,191,528	—396,985
Boston & Maine	April	1,762	5,161,101	1,041,887	6,832,740	1,041,730	1,014,313	97,080	2,775,833	5,207,956	76.2	1,624,784	743,272	613,003	153,839
	4 mos.	1,762	20,207,295	4,636,348	27,276,701	4,335,470	4,262,777	387,115	11,355,793	21,501,930	78.8	5,774,771	2,669,047	1,933,842	564,207
Burlington-Rock Island	April	228	257,356	43,471	321,166	36,725	84,603	4,435	196,389	339,808	105.8	—18,642	10,178	—89,774	25,954
	4 mos.	228	911,064	188,794	1,187,539	148,847	187,878	16,275	583,035	1,005,896	84.7	181,643	42,008	—73,426	100,159
Cambria & Indiana	April	35	112,889	.....	112,981	14,069	93,153	665	19,894	136,417	120.74	—23,436	53,459	5,439	—19,865
	4 mos.	35	537,630	.....	537,904	50,504	366,444	2,657	86,663	537,725	100.0	179	228,705	150,638	223,812
Canadian Pacific Lines in Maine	April	234	570,606	27,356	614,066	58,520	71,109	7,167	219,236	368,348	60.0	245,718	25,976	125,538	83,518
	4 mos.	234	2,292,926	141,534	2,513,348	290,731	310,332	26,415	934,199	1,609,004	64.0	904,344	106,583	437,207	301,163
Canadian Pacific Lines in Vermont	April	90	169,437	14,692	201,436	28,370	28,235	4,935	136,352	204,570	101.6	—3,134	14,154	—62,503	—121,078
	4 mos.	90	549,991	66,890	694,322	142,593	121,491	17,929	552,118	859,075	123.7	—164,753	63,447	—401,199	—528,885
Central of Georgia	April	1,816	2,215,717	195,756	2,717,820	456,392	418,890	98,964	1,309,617	2,434,469	89.6	283,351	247,628	44,510	—325
	4 mos.	1,816	8,730,600	1,000,977	10,812,801	1,859,074	1,861,435	391,601	5,261,310	9,985,255	92.4	827,546	986,417	—139,585	49,670
Central of New Jersey	April	419	2,428,262	430,062	3,098,368	394,526	589,638	53,116	1,533,088	2,723,961	87.9	374,407	361,099	—271,103	—255,083
	4 mos.	419	9,149,988	1,702,056	11,857,985	1,552,479	2,198,412	195,836	6,294,279	10,886,648	91.8	971,337	1,485,197	—1,615,784	—790,025
Central of Pennsylvania	April	213	1,492,287	16,501	1,542,833	119,105	275,294	22,652	460,965	915,827	59.4	627,006	72,517	729,975	50,261
	4 mos.	213	5,681,719	74,365	5,883,254	483,974	1,130,292	85,996	1,942,149	3,793,351	64.5	2,089,903	266,364	2,542,806	193,869
Central of Vermont	April	422	600,000	56,000	714,713	117,323	135,128	11,398	325,573	621,282	86.9	93,431	52,155	—12,351	146,266
	4 mos.	422	2,561,000	291,000	3,095,608	497,188	569,320	46,922	1,389,632	2,637,699	85.2	457,909	210,185	29,599	—421,420
Chesapeake & Ohio	April	3,106	15,003,137	682,498	16,492,495	2,851,785	3,489,955	450,432	5,892,367	13,517,775	82.0	2,974,720	1,942,781	1,436,489	—1,581,431
	4 mos.	3,106	71,359,580	2,639,807	76,748,562	10,496,994	13,987,184	1,615,136	25,033,256	54,030,816	70.4	22,717,746	12,166,758	13,290,626	8,097,238
Chicago & Eastern Illinois	April	910	1,675,126	274,433	2,183,847	317,102	452,495	73,804	1,021,313	1,983,838	90.8	200,009	113,500	—26,643	—435,208
	4 mos.	910	6,899,155	1,195,278	9,035,926	1,222,737	1,756,977	299,340	4,181,844	7,924,610	87.7	1,111,316	567,000	105,894	—1,029,317
Chicago & Illinois Midland	April	131	471,357	881	501,180	79,764	118,680	22,171	148,734	398,011	79.4	103,169	51,286	47,050	—81,891
	4 mos.	131	2,402,228	3,585	2,535,622	338,299	484,509	96,584	694,257	1,732,421	68.3	803,201	357,558	432,452	115,312
Chicago & North Western	April	8,064	11,269,678	1,596,997	14,395,320	2,155,012	2,738,320	284,923	6,124,547	11,924,716	82.8	2,470,604	1,093,358	1,095,650	64,242
	4 mos.	8,064	40,867,434	6,918,093	54,060,093	8,224,143	10,693,926	1,087,563	24,669,334	47,178,241	87.3	6,881,852	4,313,643	1,271,505	—434,048
Chicago, Burlington & Quincy	April	8,868	14,532,086	1,263,620	17,375,522	2,450,034	2,184,673	391,703	5,929,942	11,522,367	66.3	5,853,155	2,892,494	2,562,092	1,122,996
	4 mos.	8,868	58,850,660	5,098,394	70,259,832	8,069,277	9,150,949	1,418,052	23,440,481	44,382,494	63.2	25,877,338	11,932,120	12,431,443	10,856,540
Chicago Great Western	April	1,500	2,315,878	78,492	2,584,976	444,316	333,323	79,112	1,081,486	2,026,155	78.4	558,821	130,940	243,055	—59,374
	4 mos.	1,500	8,758,109	341,789	9,900,677	1,166,409	1,347,652	307,663	4,537,637	7,680,353	77.6	2,220,324	606,560	883,633	—569,713
Chicago, Indianapolis & Louisville	April	541	1,115,838	63,223	1,252,507	253,093	164,090	53,151	504,225	1,037,674	82.8	214,833	67,103	28,013	—116,026
	4 mos.	541	4,269,262	233,600	4,807,393	1,048,847	672,501	212,609	1,995,542	4,188,007	87.1	619,386	296,868	—130,449	—245,807

Table of Revenues and Expenses continued on the next left-hand page.

Sustained Speed . . . a first essential

To keep pace with the demands of the traveling public, in the years just ahead, the maintaining of faster train schedules will be a first essential.

To do this will require motive power capable of handling heavy trains at high speeds—and of sustaining such speeds on long runs.

Modern Lima-built steam locomotives not only meet these exacting demands, but operate with maximum efficiency and economy.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

REVENUES AND EXPENSES OF RAILWAYS

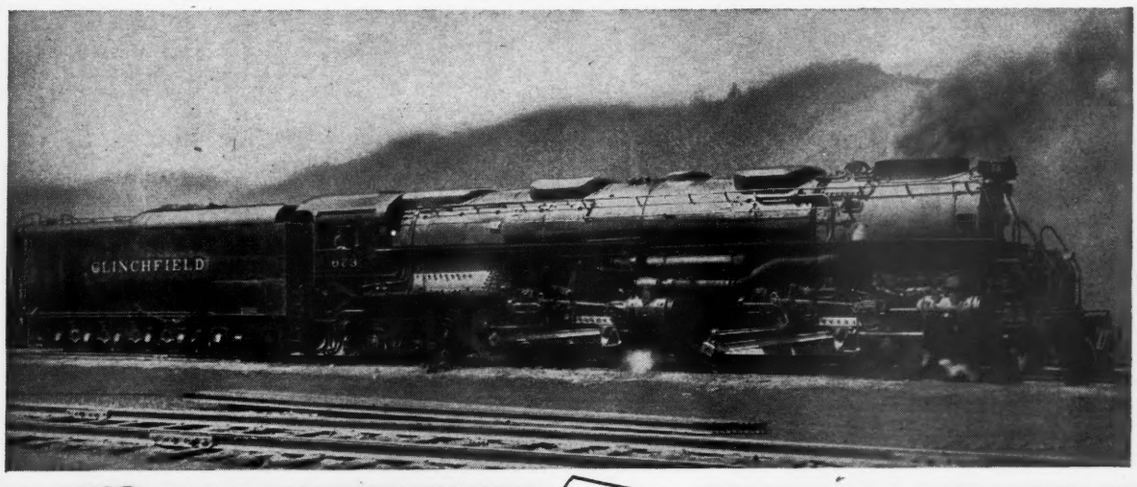
MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1947—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax-accruals	Net railway operating income 1947	Net railway operating income 1946
Chicago, Milwaukee, St. Paul & Pacific	April	10,733	$14,823,677	$1,497,355	$18,129,733	$3,103,989	$2,882,792	$386,040	$7,516,328	$14,661,033	80.9	$3,468,700	$1,737,000	$1,252,099	$840,860
	4 mos.	10,733	58,636,157	6,042,066	71,413,965	9,511,164	11,290,393	1,451,083	30,425,172	55,780,931	78.1	15,633,034	7,323,000	6,137,291	5,212,250
Chicago, Rock Island & Pacific	April	7,650	11,378,348	1,621,816	14,053,299	1,659,506	2,346,219	398,952	5,301,466	10,374,423	73.8	3,678,876	1,317,130	1,700,373	818,294
	4 mos.	7,650	44,506,876	6,875,927	55,709,844	5,918,035	9,264,560	1,588,178	21,320,455	40,790,522	73.2	14,919,322	5,493,843	6,888,752	4,844,150
Chicago, St. Paul, Minn. & Omaha	April	1,616	2,108,781	162,939	2,492,228	345,755	425,872	50,014	1,179,047	2,100,370	84.3	391,858	192,802	121,471	—253,401
	4 mos.	1,616	8,292,498	751,196	9,927,241	1,347,876	1,648,971	204,381	4,794,217	8,389,053	84.5	1,538,188	755,360	297,964	—1,080,829
Clinchfield	April	302	1,343,055	6,108	1,362,313	91,726	228,965	29,066	343,084	718,824	52.8	643,489	144,725	562,466	84,522
	4 mos.	302	5,947,659	23,736	6,021,122	374,019	899,605	112,311	1,555,080	3,040,097	50.5	2,981,025	579,285	2,641,177	1,319,226
Colorado & Southern	April	748	718,575	70,699	880,420	181,944	178,386	21,430	416,976	841,891	95.6	38,529	57,700	—43,240	—44,857
	4 mos.	748	3,045,661	371,389	3,779,585	515,269	708,887	86,986	1,651,131	3,143,955	83.2	635,630	420,259	130,324	—72,996
Ft. Worth & Denver City	April	902	750,482	126,339	966,741	147,882	155,639	31,018	369,230	765,887	79.2	200,854	72,748	90,767	—50,943
	4 mos.	902	2,925,709	513,637	3,801,504	542,269	634,015	127,667	1,454,118	3,010,096	79.2	791,408	320,558	398,580	26,403
Colorado & Wyoming	April	42	85,952	.....	153,207	8,257	17,123	1,294	61,096	93,795	61.2	59,412	31,804	27,971	82,054
	4 mos.	42	349,713	.....	620,927	30,956	61,481	3,560	251,462	370,276	59.6	250,651	136,643	116,703	75,332
Columbus & Greenville	April	168	106,478	2,029	123,048	29,472	23,434	4,478	51,793	125,250	101.8	—2,202	11,749	—10,845	15,713
	4 mos.	168	544,251	8,995	600,648	146,513	121,863	20,673	275,999	630,159	104.9	—29,511	56,452	—81,903	30,115
Delaware & Hudson	April	794	3,875,608	160,137	4,173,596	506,283	929,925	58,419	1,644,548	3,291,318	78.9	882,278	466,601	397,438	—22,365
	4 mos.	794	15,942,449	699,676	17,170,903	1,902,892	3,651,404	235,333	6,747,567	13,142,885	76.5	4,028,018	2,078,045	1,902,653	817,356
Delaware, Lackawanna & Western	April	973	5,335,617	776,931	6,682,134	803,002	1,110,245	128,747	2,956,749	5,213,173	78.0	1,468,961	661,028	698,203	278,320
	4 mos.	973	20,201,779	3,132,709	25,524,330	2,908,913	4,212,305	530,053	11,856,818	20,348,982	79.7	5,175,348	2,416,007	2,423,765	1,282,657
Denver & Rio Grande Western	April	2,471	3,674,245	215,691	4,089,155	570,995	889,053	131,147	1,507,454	3,312,914	81.0	776,241	504,027	320,626	—58,959
	4 mos.	2,471	15,573,083	951,093	17,294,014	1,965,264	3,772,301	510,920	6,721,150	13,811,037	79.9	3,482,977	1,688,766	2,037,007	1,258,412
Denver & Salt Lake						Merged With Denver & Rio Grande Western									
						Merged With Denver & Rio Grande Western									
Detroit & Mackinac	April	230	151,394	1,597	163,365	18,462	17,012	1,003	35,079	77,454	47.4	85,911	31,271	48,414	12,703
	4 mos.	230	498,844	6,273	547,370	68,723	61,644	4,096	135,193	293,297	53.6	254,073	88,344	145,644	33,175
Detroit & Toledo Shore Line	April	50	428,024	.....	430,215	43,030	42,017	12,768	130,357	238,675	55.5	191,540	59,049	65,491	—3,725
	4 mos.	50	2,125,392	.....	2,134,231	139,039	156,946	45,897	593,147	976,158	45.7	1,158,073	364,714	425,067	145,274
Detroit, Toledo & Ironton	April	464	1,006,046	859	1,048,554	119,561	174,335	18,158	263,581	608,814	58.1	439,740	182,522	230,263	104,851
	4 mos.	464	4,543,772	3,293	4,729,397	459,085	680,433	75,919	1,153,108	2,493,571	52.7	2,235,826	895,128	1,197,448	502,000
Duluth, Missabe & Iron Range	April	547	2,283,706	2,069	2,616,504	442,095	356,742	5,463	763,564	1,617,354	61.8	999,150	222,842	768,089	—217,151
	4 mos.	547	2,900,225	8,495	3,335,183	1,500,340	1,585,510	26,345	1,729,351	5,034,505	151.0	—1,699,322	445,288	—2,166,769	—2,922,307
Duluth, Winnipeg & Pacific	April	175	297,000	1,500	303,100	55,332	37,729	2,940	123,717	224,981	74.2	78,119	25,976	13,895	—29,456
	4 mos.	175	1,190,000	5,300	1,215,300	187,476	156,770	11,885	515,430	891,862	73.4	323,438	104,273	76,523	—59,959
Elgin, Joliet & Eastern	April	391	2,546,746	12	3,101,232	237,568	427,778	21,205	1,157,812	1,932,400	62.3	1,168,832	488,419	411,414	66
	4 mos.	391	10,602,116	21	12,604,307	769,748	1,684,761	83,459	4,953,464	7,828,155	62.1	4,776,152	1,892,443	1,805,542	—350,695
Erie	April	2,229	11,258,356	519,772	12,606,598	1,388,516	2,183,850	268,295	5,314,814	9,734,258	77.2	2,872,340	1,209,429	1,092,113	—175,231
	4 mos.	2,229	43,173,992	2,078,505	48,330,431	4,752,679	8,834,566	1,035,958	21,487,723	38,303,378	79.3	10,027,053	4,462,843	3,624,411	—99,094
Florida East Coast	April	575	1,519,420	610,989	2,388,883	384,629	396,312	57,643	933,764	1,933,305	80.9	455,578	93,165	226,618	488,778
	4 mos.	655	6,510,574	3,687,018	11,263,469	1,633,571	1,539,246	241,508	3,963,379	8,100,933	71.9	3,162,536	884,956	1,706,793	2,207,541
Georgia Railroad	April	328	562,679	31,235	645,187	90,660	91,401	26,024	302,623	536,612	83.2	108,575	47,675	78,046	62,736
	4 mos.	328	2,318,613	113,962	2,619,292	349,551	446,545	106,416	1,339,506	2,344,422	89.5	274,870	192,711	137,977	—8,119
Georgia & Florida	April	408	190,010	2,066	199,234	61,077	30,655	12,792	84,270	197,496	99.1	1,738	16,845	—26,399	—27,112
	4 mos.	408	763,176	8,268	795,267	205,173	108,894	49,315	339,175	737,967	92.8	57,300	62,157	—58,095	—22,665
Grand Trunk Western	April	972	3,281,000	172,000	3,746,000	500,618	524,667	48,638	1,673,675	2,879,580	76.9	866,420	272,339	372,261	65,007
	4 mos.	972	12,676,000	669,000	14,303,000	1,930,664	2,229,369	199,752	6,462,284	11,316,132	79.1	2,986,868	1,033,175	1,309,035	—792,492
Canadian Nat'l Lines in New England	April	172	140,000	7,000	160,400	47,608	57,971	2,538	119,372	242,690	151.3	—82,290	25,558	—139,127	—138,729
	4 mos.	172	635,000	29,900	712,400	194,118	135,016	10,125	455,004	838,763	117.7	—126,363	102,232	—346,038	—449,493
Great Northern	April	8,333	13,714,463	1,008,584	15,959,335	2,768,270	2,762,434	282,233	5,406,432	11,755,036	73.7	4,204,299	1,791,322	2,336,794	—402,662
	4 mos.	8,333	46,275,886	3,284,552	53,647,900	9,719,546	10,760,972	1,278,098	20,949,520	44,802,297	83.5	8,845,603	5,689,087	3,093,498	73,952
Green Bay & Western	April	234	263,676	—266	268,837	52,963	25,182	12,958	80,017	182,971	68.1	85,866	34,955	40,875	—8,238
	4 mos.	234	994,399	—118	1,018,946	179,377	111,595	53,989	326,428	717,727	70.4	301,219	123,683	136,550	5,182

Table of Revenues and Expenses continued on the next left-hand page.

OHIO AMI, DEARBORN, MICHIGAN
EVITOMOTO AMI
PRINTING SERVICE

Security Circulators
IN HEAVY MOTIVE POWER



on the Clinchfield Route

● Each of the six 4-6-6-4 steam locomotives recently placed in service by the Clinchfield Railroad Company, to haul heavy coal trains over southern mountain grades, is equipped with five Security Circulators.

Security Circulators improve the circulation of water in the boiler; aid in maintaining steaming capacity; reduce honeycombing, flue plugging and cinder cutting; permit the use of a 100% arch, and prolong the life of arch brick.

AMERICAN ARCH COMPANY, INC.

NEW YORK • CHICAGO

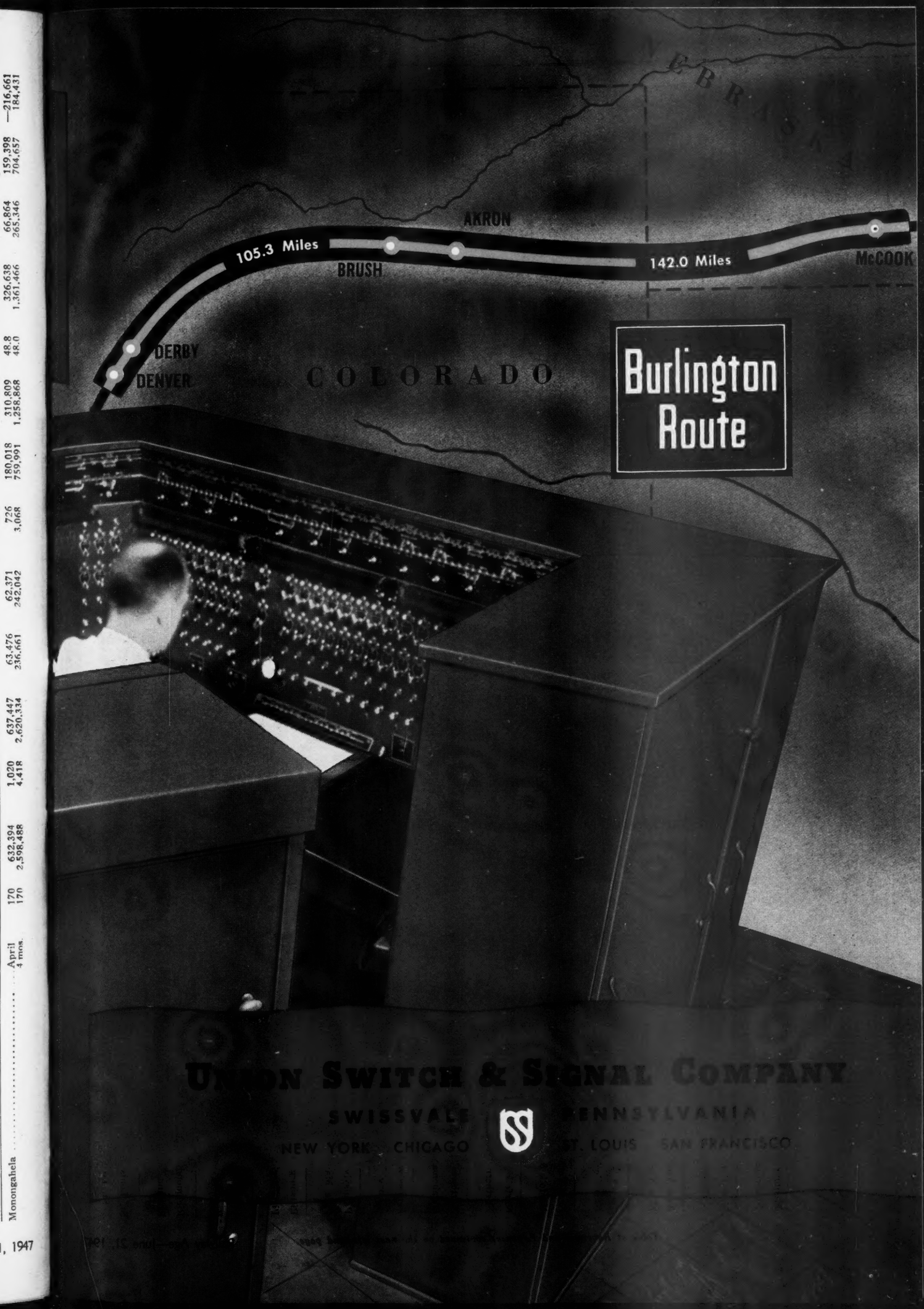
SECURITY CIRCULATOR DIVISION

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1947—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax-accruals	Net railway operating income 1947	Net railway operating income 1946
Gulf, Mobile & Ohio	April	1,945	$3,001,683	$78,104	$3,207,253	$623,196	$539,720	$115,013	$986,467	$2,437,814	76.0	$769,439	$333,667	$289,203	—$89,363
	4 mos.	1,945	12,374,257	346,461	13,179,310	2,321,105	2,263,644	443,816	4,035,732	9,694,264	73.6	3,485,046	1,435,071	1,317,619	186,283
Illinois Central (System)	April	6,582	15,389,132	2,114,985	19,566,353	3,212,006	3,466,922	385,775	6,944,783	14,865,073	76.0	4,701,280	2,363,536	1,973,897	1,666,574
	4 mos.	6,582	62,981,281	8,213,373	78,963,545	11,956,062	13,790,018	1,428,708	28,320,373	58,855,196	74.5	20,108,349	10,034,083	8,863,369	5,495,104
Illinois Terminal	April	476	712,876	128,102	937,621	130,126	140,795	26,838	363,384	694,427	74.06	243,194	110,212	99,855	37,144
	4 mos.	476	2,863,423	503,771	3,717,981	475,020	503,825	103,723	1,371,446	2,588,296	69.62	1,129,685	497,733	505,792	207,352
Kansas City Southern	April	890	2,435,199	84,465	2,773,882	306,682	345,870	72,943	860,149	1,693,383	61.1	1,080,499	361,000	554,702	392,756
	4 mos.	890	9,935,738	330,101	11,181,595	1,258,464	1,399,452	286,275	3,421,476	6,793,195	60.8	4,388,400	1,543,000	2,207,693	1,615,108
Kansas, Oklahoma & Gulf	April	328	463,542	1,152	467,953	35,225	36,962	14,732	131,546	233,804	50.0	234,149	90,202	113,796	31,903
	4 mos.	328	1,693,162	4,577	1,712,435	121,669	117,736	55,875	451,619	805,467	47.0	906,968	350,457	436,576	214,032
Lake Superior & Ishpeming	April	156	198,602	82	257,174	33,341	37,212	1,394	64,343	145,186	56.5	111,988	25,817	90,530	—136,009
	4 mos.	156	370,545	328	437,694	118,515	166,501	6,236	175,637	500,617	114.4	—62,923	97,743	—138,648	—372,776
Lehigh & Hudson River	April	96	231,242	.....	231,713	46,748	32,989	7,313	281,926	177,056	76.4	54,657	23,099	8,067	7,943
	4 mos.	96	1,118,831	.....	1,122,727	161,772	157,068	27,738	381,836	761,948	67.9	360,779	140,647	116,925	72,741
Lehigh & New England	April	193	624,941	.....	630,432	77,342	111,375	9,844	186,363	409,307	64.9	221,125	106,503	129,039	65,974
	4 mos.	193	2,084,379	.....	2,106,538	259,436	378,637	42,100	723,590	1,501,699	71.3	604,839	322,964	362,425	312,601
Lehigh Valley	April	1,252	5,228,849	377,938	5,994,991	844,339	1,109,550	126,256	2,713,975	5,039,991	84.1	955,000	550,987	228,455	218,240
	4 mos.	1,254	20,,778,941	1,464,940	23,854,464	3,053,509	4,042,707	517,001	10,976,670	19,591,796	82.1	4,262,668	1,803,039	1,852,347	1,744,909
Louisiana & Arkansas	April	756	1,212,365	28,007	1,294,158	174,017	133,432	39,490	387,650	779,767	60.3	514,391	222,204	203,068	144,827
	4 mos.	756	4,805,370	143,285	5,159,010	689,571	530,223	153,954	1,569,011	3,113,047	60.3	2,045,963	852,558	846,619	619,884
Louisville & Nashville	April	4,768	12,892,188	1,121,630	15,108,489	2,153,256	3,112,175	270,436	6,130,728	12,220,188	80.9	2,888,301	1,898,610	1,246,695	218,358
	4 mos.	4,768	53,673,575	4,847,900	62,532,660	8,166,920	12,561,063	1,104,995	25,561,434	49,624,031	79.4	12,908,629	8,456,170	6,185,075	5,180,317
Maine Central	April	988	1,744,032	160,339	2,026,833	307,886	332,089	15,986	749,632	1,466,435	72.4	560,398	247,957	235,927	160,756
	4 mos.	988	6,862,890	646,783	7,981,298	1,221,404	1,323,190	66,277	3,149,830	6,005,992	75.3	1,975,306	833,414	766,244	474,585
Midland Valley	April	334	146,151	15	149,066	35,212	17,163	3,388	54,080	116,120	77.9	32,946	13,439	15,017	10,531
	4 mos.	334	626,706	28	637,852	106,931	60,449	12,074	198,007	403,120	63.2	234,732	99,175	108,645	49,400
Minneapolis & St. Louis	April	1,408	1,465,544	9,858	1,527,759	215,146	239,137	87,940	491,896	1,112,563	72.8	415,196	217,207	181,951	—176,940
	4 mos.	1,408	5,573,108	40,872	5,826,507	816,773	882,809	340,872	1,955,874	4,293,461	73.7	1,533,046	805,193	630,566	—215,275
Minneapolis, St. Paul & S. S. Marie	April	3,224	2,299,204	87,461	2,548,467	542,278	418,357	55,405	1,059,241	2,164,811	84.9	383,656	207,505	160,448	—76,635
	4 mos.	3,224	8,301,425	362,549	9,240,046	1,728,367	1,724,411	206,286	4,255,954	8,257,315	89.4	982,731	785,276	170,711	—1,013,438
Duluth, South Shore & Atlantic	April	530	448,892	9,552	482,106	75,527	70,119	14,317	157,038	326,533	67.7	155,573	25,432	104,676	—24,076
	4 mos.	530	1,557,498	44,436	1,688,837	296,492	276,826	59,306	728,586	1,398,456	82.8	290,381	101,735	124,245	—40,027
Spokane International	April	152	146,729	1,243	157,965	36,806	14,395	3,396	55,562	118,139	74.8	39,826	12,469	15,086	10,151
	4 mos.	152	566,250	6,817	612,315	140,550	62,147	14,752	210,746	458,538	74.9	153,777	53,186	52,376	41,026
Mississippi Central	April	148	154,074	63	159,252	47,857	17,798	10,754	37,481	121,597	76.4	37,655	13,148	11,310	12,148
	4 mos.	148	618,844	709	637,988	166,727	67,854	42,434	156,367	463,650	72.7	174,338	60,960	57,818	34,473
Missouri & Arkansas	April	365	4,263	.....	4,389	6,840	485	—32	—867	1,706	38.8	2,683	592	178	3,690
	4 mos.	365	5,875	329	12,021	32,842	14,246	623	8,660	63,528	528.4	—51,507	4,423	—57,560	—49,977
Missouri-Illinois	April	172	367,831	298	371,144	56,560	37,108	5,689	90,696	197,164	53.1	173,980	73,182	88,613	64,170
	4 mos.	172	1,242,850	1,230	1,258,060	184,148	135,989	24,494	318,886	691,954	55.0	566,106	246,465	288,184	179,913
Missouri-Kansas-Texas Lines	April	3,253	4,668,851	367,335	5,491,645	873,501	801,732	197,386	2,160,500	4,297,518	78.3	1,194,127	543,299	433,782	342,188
	4 mos.	3,253	17,412,098	1,565,205	20,799,018	3,124,538	3,070,736	786,918	8,358,528	16,360,733	78.7	4,438,285	1,977,165	1,542,756	1,649,216
Missouri Pacific	April	7,038	13,392,520	1,190,895	15,961,934	2,346,677	2,723,868	371,752	6,305,428	12,385,711	77.6	3,576,223	1,074,214	1,616,001	1,005,760
	4 mos.	7,037	53,193,664	5,109,684	63,704,465	8,602,036	10,718,452	1,433,996	24,756,304	47,971,708	75.3	15,732,757	5,117,472	7,808,615	5,678,356
Gulf Coast Lines	April	1,734	3,793,634	91,863	4,042,695	641,894	380,837	67,660	1,169,025	2,374,007	58.7	1,668,688	423,600	858,543	990,321
	4 mos.	1,734	13,990,943	353,314	14,962,785	2,633,731	1,500,373	271,500	4,550,853	9,388,916	62.8	5,573,869	1,327,322	2,826,247	3,279,935
International-Great Northern	April	1,110	2,016,400	198,293	2,473,219	437,827	381,878	45,062	1,154,261	2,132,497	86.2	340,722	130,738	18,166	63,587
	4 mos.	1,110	7,539,506	844,894	9,415,492	1,722,463	1,436,354	177,590	4,279,981	8,089,015	85.9	1,326,477	511,011	111,693	100,337
Monongahela	April	170	632,394	1,020	637,447	63,476	62,371	726	180,018	310,809	48.8	326,638	66,864	159,398	—216,661
	4 mos.	170	2,598,488	4,418	2,620,334	236,661	242,042	3,068	759,991	1,258,868	48.0	1,361,466	265,346	704,657	184,431

Table of Revenues and Expenses continued on second left-hand page.


AKRON
105.3 Miles
BRUSH
142.0 Miles
McCOOK
DERBY
DENVER
COLORADO
Burlington
Route
SWISSVALE
NEW YORK
CHICAGO
ST. LOUIS
SAN FRANCISCO

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1947—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1947	Net railway operating income 1946
St. Louis Southwestern Lines	April	1,575	$4,462,219	$48,960	$4,656,839	$613,367	$459,332	$124,314	$1,271,358	$2,607,853	56.0	$2,048,986	$706,221	$1,147,210	$795,747
	4 mos.	1,575	16,599,900	250,785	17,414,829	2,409,443	1,826,788	487,694	5,087,646	10,391,464	59.7	7,023,365	2,765,776	3,589,189	1,960,174
Seaboard Air Line	April	4,156	8,233,196	1,510,295	10,582,486	1,876,311	1,813,905	261,645	4,047,216	8,511,462	80.4	2,071,024	998,093	729,639	1,045,588
	4 mos.	4,156	33,076,429	6,976,925	43,293,169	6,794,080	7,088,578	1,077,680	16,763,340	33,886,469	78.3	9,406,700	3,906,395	3,887,119	4,630,878
Southern Railway	April	6,484	15,491,285	1,538,495	18,359,525	2,824,279	3,333,922	316,059	6,927,571	14,147,039	77.1	4,212,486	2,040,335	1,767,063	969,860
	4 mos.	6,484	62,817,051	6,939,008	74,735,554	11,005,588	13,335,625	1,319,661	28,645,338	57,234,805	76.6	17,500,749	8,330,479	7,427,407	6,562,711
Alabama Great Southern	April	316	1,132,742	99,477	1,318,649	201,140	282,204	27,163	480,316	1,047,089	79.4	271,560	161,917	129,452	64,090
	4 mos.	316	4,393,324	513,178	5,242,181	766,309	1,186,156	116,115	1,940,277	4,220,310	80.5	1,021,871	662,550	483,772	171,000
Cinn., New Orleans & Texas Pacific	April	337	2,505,886	178,979	2,843,263	328,462	569,186	52,181	845,825	1,905,071	67.0	938,192	510,159	494,712	275,309
	4 mos.	337	9,550,191	1,048,475	11,205,881	1,297,959	2,301,741	195,554	3,509,884	7,720,557	68.9	3,485,324	1,925,103	1,876,826	1,038,560
Georgia Southern & Florida	April	397	395,621	101,806	539,066	90,365	64,182	6,849	182,718	362,676	67.3	176,390	65,321	72,303	31,470
	4 mos.	397	1,489,274	434,374	2,100,756	390,335	238,195	28,459	803,666	1,538,824	73.3	561,932	212,337	207,081	166,280
New Orleans & Northeastern	April	204	773,582	48,372	877,450	130,901	95,905	14,713	257,947	538,144	61.3	339,306	161,162	131,426	56,443
	4 mos.	204	2,970,221	227,189	3,400,872	488,233	397,039	68,981	977,263	2,073,770	61.0	1,327,102	609,937	553,495	246,991
Southern Pacific	April	8,228	27,032,439	3,614,833	33,221,485	3,949,602	6,108,236	687,789	12,962,652	25,606,531	77.1	7,614,954	4,441,819	1,915,849	3,066,138
	4 mos.	8,228	105,563,532	16,217,687	131,700,062	15,632,253	23,307,188	2,547,576	51,858,150	101,064,667	76.7	30,635,395	16,035,278	10,092,193	5,677,200
Texas & New Orleans	April	4,320	7,879,409	876,516	9,356,745	1,104,480	1,261,129	178,487	3,202,669	6,159,506	65.8	3,197,239	1,375,122	1,351,660	34,236
	4 mos.	4,320	30,650,015	3,565,922	36,670,577	4,604,287	4,667,652	727,773	13,145,659	24,863,946	67.8	11,806,631	5,117,892	4,916,052	4,756,210
Spokane, Portland & Seattle	April	944	1,550,401	54,895	1,729,057	396,994	224,937	16,253	658,322	1,372,630	79.4	356,427	151,116	98,179	—85,133
	4 mos.	944	6,153,161	210,320	6,818,294	1,419,618	879,741	72,470	2,541,344	5,222,217	76.6	1,596,077	624,578	527,495	25,965
Tennessee Central	April	286	326,993	6,988	356,071	71,551	71,240	9,605	151,287	318,223	89.4	37,848	16,468	—2,011	9,942
	4 mos.	286	1,294,779	31,842	1,414,843	247,644	281,297	38,955	627,423	1,256,556	88.8	158,287	95,603	—28,561	—20,310
Texas & Pacific	April	1,873	3,959,361	398,899	4,770,567	583,400	776,457	153,333	1,800,999	3,616,220	75.8	1,154,347	380,947	605,648	768,148
	4 mos.	1,873	14,999,029	1,738,816	18,395,147	2,489,802	2,817,414	606,980	6,983,966	14,048,794	76.4	4,346,353	1,362,430	2,311,813	2,637,013
Texas Mexican	April	162	218,441	95	247,936	26,042	24,742	5,078	64,116	132,613	53.5	115,323	42,959	55,903	22,202
	4 mos.	162	797,880	413	902,681	110,235	96,416	19,027	233,268	507,662	56.2	395,019	98,083	239,652	82,791
Toledo, Peoria & Western	April														
	4 mos.														
Union Pacific System	April	9,775	24,754,473	3,304,013	30,287,918	4,636,511	5,576,156	717,311	10,865,593	23,544,671	77.7	6,743,247	3,733,765	2,078,834	1,452,130
	4 mos.	9,775	100,607,061	13,401,316	123,423,231	15,735,538	20,986,509	2,804,584	44,589,556	91,261,937	73.9	32,161,294	16,855,837	11,741,953	8,527,312
Utah	April	111	122,449	.....	122,552	23,897	46,638	716	47,351	125,156	102.1	—2,604	6,298	—8,652	—41,654
	4 mos.	111	729,738	.....	729,927	96,835	189,115	2,565	264,992	579,731	79.4	150,196	84,620	59,267	11,742
Virginian	April	661	2,227,715	5,395	2,392,466	322,701	656,606	34,252	591,467	1,683,739	70.4	708,727	393,000	417,961	—193,345
	4 mos.	661	11,225,262	20,856	11,774,362	1,195,039	2,590,534	137,046	2,762,232	6,975,817	59.2	4,798,545	2,306,500	2,930,709	1,572,383
Wabash	April	2,393	7,063,427	402,504	7,962,483	1,166,173	1,057,154	214,289	2,961,514	5,698,868	71.6	2,263,615	848,103	1,000,045	481,673
	4 mos.	2,393	27,266,007	1,678,607	30,903,991	3,837,630	4,104,790	860,889	11,841,674	21,707,949	70.2	9,196,042	3,544,086	4,099,024	2,068,314
Ann Arbor	April	294	586,414	3,420	603,839	69,558	117,256	20,399	263,103	484,810	80.3	119,029	56,658	36,651	2,019
	4 mos.	294	2,474,704	13,610	2,533,540	269,319	469,448	81,194	1,109,017	1,979,841	78.1	553,699	257,046	228,231	69,298
Western Maryland	April	837	2,993,491	12,844	3,173,602	465,656	581,833	61,870	1,074,776	2,295,907	72.3	877,695	340,000	543,345	—85,869
	4 mos.	837	12,666,188	57,058	13,309,975	1,629,477	2,272,393	247,060	4,481,445	9,087,552	68.3	4,222,423	1,813,000	2,402,720	1,308,334
Western Pacific	April	1,195	2,635,925	158,871	2,893,443	647,171	439,606	135,507	1,142,677	2,520,322	87.1	373,121	215,715	93,768	344,989
	4 mos.	1,195	10,642,322	624,329	11,621,785	2,228,475	2,033,042	495,878	4,651,305	10,024,754	86.3	1,597,031	853,899	442,257	1,336,145
Wheeling & Lake Erie	April	505	2,269,861	.....	2,357,247	298,280	344,143	52,077	721,892	1,472,565	62.5	884,682	528,714	530,672	—30,858
	4 mos.	505	8,696,858	8	8,973,732	959,768	1,378,063	213,780	2,814,559	5,592,921	62.3	3,380,811	1,937,672	2,162,572	568,336
Wisconsin Central	April	1,051	2,043,357	36,149	2,234,626	213,654	301,313	51,258	854,682	1,494,750	66.9	739,878	146,299	447,841	118,263
	4 mos.	1,051	7,585,710	140,425	8,243,620	796,763	1,258,777	193,212	3,542,156	6,073,507	73.7	2,170,113	574,729	1,121,145	95,688

Fuel Oil Treatment

New discovery dissolves sludge and reduces soot and carbon

By GENE RAINEVILLE

Manual cleaning of sludge from tank cars and storage tanks has been relegated to the list of ancient railroad practices by a remarkable new chemical solution which cleans fuel systems from storage tanks to burner tips and reduces fireside cleaning to brushing or blowing.

This amazing fuel oil treatment made by Elraco Engineering Co. of Los Angeles, Calif., was not a lucky discovery but rather a scientific development. Several ingredients which have known beneficial effects upon fuel oil and the residual deposits of combustion have been incorporated in this product for use in all types of boilers, furnaces and heaters burning fuel oil.

This treatment inhibits the oxidation of hydrocarbons in the fuel oil and holds the carbon clusters in constant suspension so that they are consumed as the oil is burned. No sludge deposits are left in the tanks. Water caused by condensation and generally present in storage tanks can be thoroughly incorporated in the fuel oil with this treatment.

This amazing product called Elraco Soot and Sludge Remover has a sludge dissolving action which tends to keep the entire fuel system clean. Carbon particles and sludge deposits are continuously subjected to this solvent and soon break down. Sludge which ordinarily has a flash point of 305° F. will, when treated with Elraco, flash at 170°. Thus Elraco assures an even flow of oil and high efficiency of combustion.

In the process of burning, Elraco generates a chemical gas which reduces soot to fine carbon particles which are generally carried away by the smoke or removed by brushing or blowing.

The cost of treating fuel oil with Elraco Soot and Sludge Remover is exceedingly small. Considering that it cleans tank cars and storage tanks . . . eliminates the expensive job of manual sludge removal . . . cleans the complete fuel system from storage tank to burners . . . and reduces fireside cleaning to brushing and blowing, this product can save your railroad many thousands of dollars per year.

Several departments will want to thoroughly test this product, so write for particulars to Elraco Engineering Co., 732 W. 58th Street, Los Angeles 37, Calif. (ADVERTISEMENT)

General News

(Continued from page 1274)

I. C. C. Examiners Assigned

Acting "in compliance with section 11 of the Administrative Procedures Act," the Interstate Commerce Commission on June 10 designated the following examiners as hearing examiners:

Bureau of Formal Cases

Arthur R. Mackley	Martin J. Walsh
G. Heard Mattingly	Clarence K. Glover
Frank E. Mullen	Frank C. Weems
Howard Hosmer	J. Edgar Snider
Paul O. Carter	Russell M. Brown
Chester E. Stiles	Samuel R. Diamondson
Edward J. Hoy	William R. Brennan
Andrew J. Banks	Paul C. Smith
John B. McGrath	John A. Russell
Burton Fuller	Charles B. Gray
Myron Witters	Lyman N. Dishman
Frank M. Weaver	Harold M. Brown
Geo. J. Hall	Edward L. Glenn
Otis L. Mohundro	Geo. B. Vandiver
Harry G. Cummings	Otto A. Hanson
Fred L. Sharp	Edward L. Boisseree
Charles W. Berry	Walter D. McCloud
Claude A. Rice	Oren G. Barber
Marion L. Boat	

Bureau of Finance

Joseph V. Walsh	Jerome K. Lyle
Homer H. Kirby	Clarence A. Bernhard
Ralph R. Molster	Paul C. Albus

Bureau of Motor Carriers

Thurston B. Johnson	James J. Williams
Henry C. Lawton	Tobias Nattaien

Frank E. Mullen, former assistant chief examiner, Bureau of Formal Cases, having been designated as a hearing examiner, has been relieved of his duties as assistant chief examiner, and Harold D. McCoy, examiner, Secton of Complaints, Bureau of Motor Carriers, has been appointed assistant chief examiner, Bureau of Formal Cases.

The commission also announced that the Bureau of Formal Cases, headed by the chief examiner, will report generally through Chairman Aitchison instead of through Commissioner Alldredge, and with respect to matters pending before divisions through the chairman of respective divisions. Also, that the Bureau of Traffic, headed by a director, heretofore reporting through Chairman Aitchison to Division 2, will hereafter report through Commissioner Alldredge to Division 2.

Research Advisory Committee on Journal Bearings

A Research Advisory Committee for Railroad Journal Bearing Manufacturers has recently been appointed with offices at 721 Railway Exchange building, Chicago. Members of the committee include: I. E. Cox, vice-president in charge of engineering, National Bearing Division, American Brake Shoe Company, St. Louis, Mo.; R. J. Shoemaker, chief engineer, Magnus Metal Corporation, Chicago; and E. S. Pearce, president, Railway Service & Supply Corp., Indianapolis, Ind.

This committee will study railway journal-bearing performance from an operating and maintenance standpoint and cooperate with all committees of the A. A. R. Mechanical Division which are concerned with improvement of the present A. A. R. journal-bearing assembly.

The first meeting of the committee will be held shortly after the Mechanical Division convention this month at Atlantic City, N. J.

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Stone-Carrier Air Conditioning in British Royal Train

The special train used by the British royal family in touring South Africa recently was built by the Metropolitan-Cammell Carriage & Wagon Co., of Birmingham, England, and its air conditioning equipment was developed by the Carrier Corporation of Syracuse, N. Y., and J. Stone & Co. of London. Illustrations showing the luxurious appointments of this train appeared in *Railway Age* of February 8, page 326.

Operating Revenues in May 34.8 Per Cent Above 1946

From preliminary reports of 85 Class I railroads representing 81.3 per cent of total operating revenues the Association of American Railroads has estimated that the May gross amounted to $583,624,235, an increase of 34.8 per cent above the $432,977,081 reported for the same 1946 month. Estimated May freight revenues were $477,615,871, compared with $323,491,235, an increase of 47.6 per cent, while estimated passenger revenues were $62,245,241, compared with $76,229,437, a decrease of 18.4 per cent. The estimate for all other revenues was $43,763,123, compared with $33,256,409, an increase of 31.6 per cent.

New C. & N. W. Instruction Car Has Measuring Devices

A new general instruction car, unusual in that its equipment includes three Esterline Angus instruments which record braking time and distance, brake cylinder and brake pipe pressure, has just been completed by the Chicago & North Western at its Chicago shops. Serving the purposes of a dynamometer car in all respects except measurement of drawbar pull, the new car was constructed from a 70-ft. all-steel lounge car and is complete with living quarters for an instructor who will accompany the car on its tours over the system. The central portion of the car is a classroom with seats for 35 persons, and a projection booth with facilities for showing sound motion pictures and slides. Complete air-brake instruction equipment is included.

Train service employees and mechanical forces at all points on the system will be given an opportunity to attend classes on the car and see visual training aids on the equipment in which they are interested. Firemen will be instructed especially on smoke abatement.

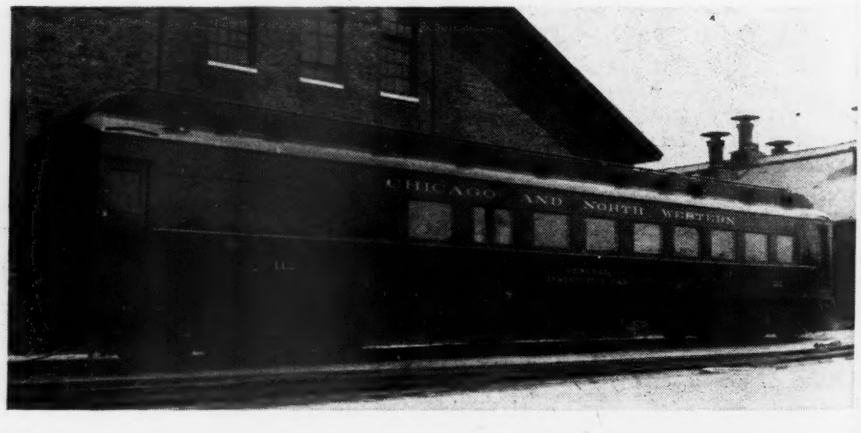
Heavy employee attendance is anticipated, as the completeness of the car offers instruction facilities in a wide field. At a preview for the general chairmen of the various crafts, considerable enthusiasm was displayed and approval of the new car was unanimous.

April Accident Statistics

The Interstate Commerce Commission has made public in its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for April and for this year's first four months. The compilation, which is subject to revision, follows:

Item	Month of April		4 months ended with April	
	1947	1946	1947	1946
Number of train accidents*	1,273	1,006	5,802	5,045
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	114	98	348	412
Injured	84	64	286	288
Passengers on trains:				
(a) In train accidents*				
Killed	2	41	28	44
Injured	196	551	601	796
(b) In train-service accidents				
Killed	6	4	12	22
Injured	226	237	838	895
Travelers not on trains:				
Killed	1	2	2	7
Injured	67	77	332	374
Employees on duty:				
Killed	60	47	237	236
Injured	2,669	2,861	12,100	13,320
All other nontrespassers:**				
Killed	141	139	758	712
Injured	459	487	2,405	2,460
Total—All Classes of persons:				
Killed	324	331	1,385	1,433
Injured	3,701	4,277	16,562	18,133

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than $150 to railway property.

** Casualties to "other nontrespassers happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers,* were as follows:

Persons:				
Killed	124	122	707	676
Injured	263	312	1,593	1,633